Secretary Continues

Google

Business Forecast Meeting

Sell-Side June 24th, 2019

Narrative
Calendar
Sell side BFM one sheeter

PTX0978

1:23-cv-00108

Agenda

Global Ads Performance Review Finance

Sell side Performance Review Chris

Growth & Adoption Metrics Chris

Deep Dive Questions: Apps P-Staff

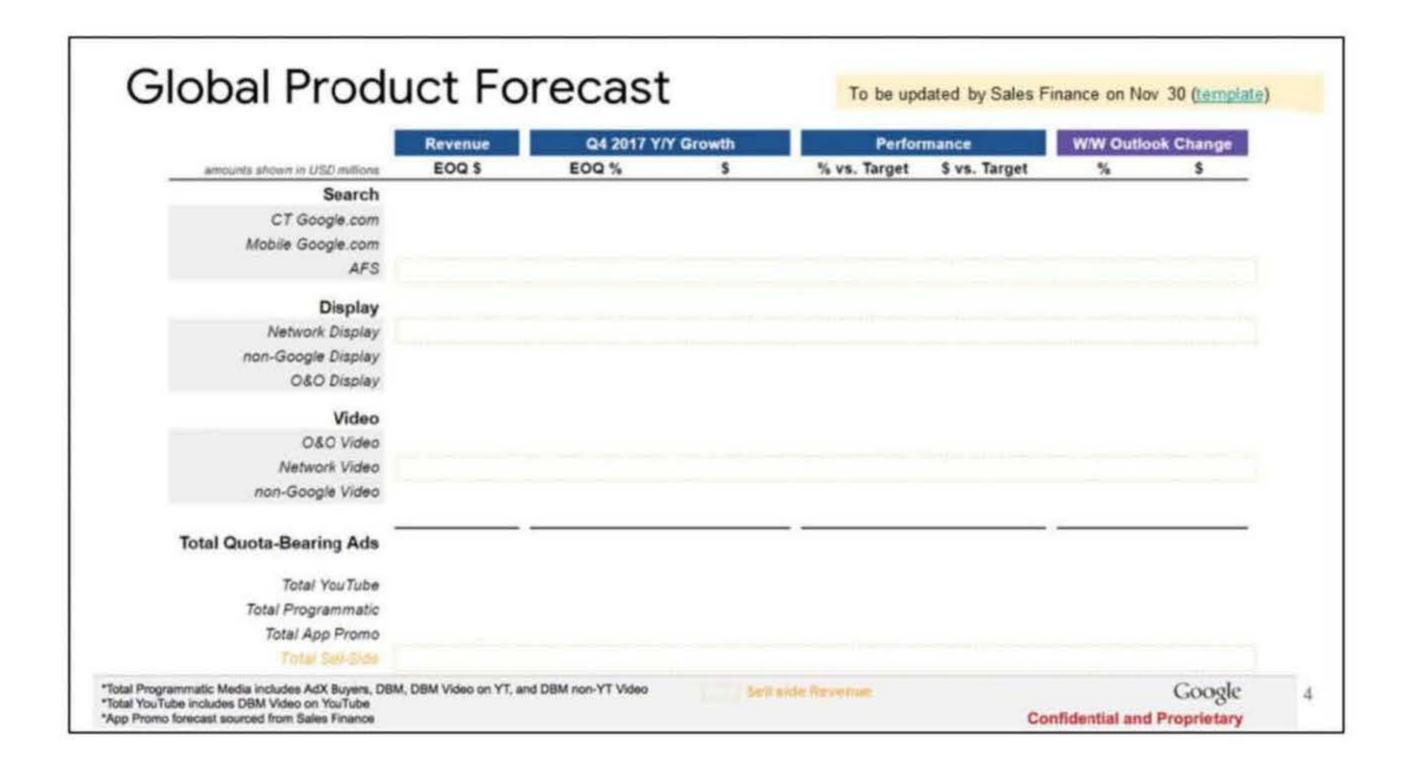
Deep Dive Questions: PG P-Staff

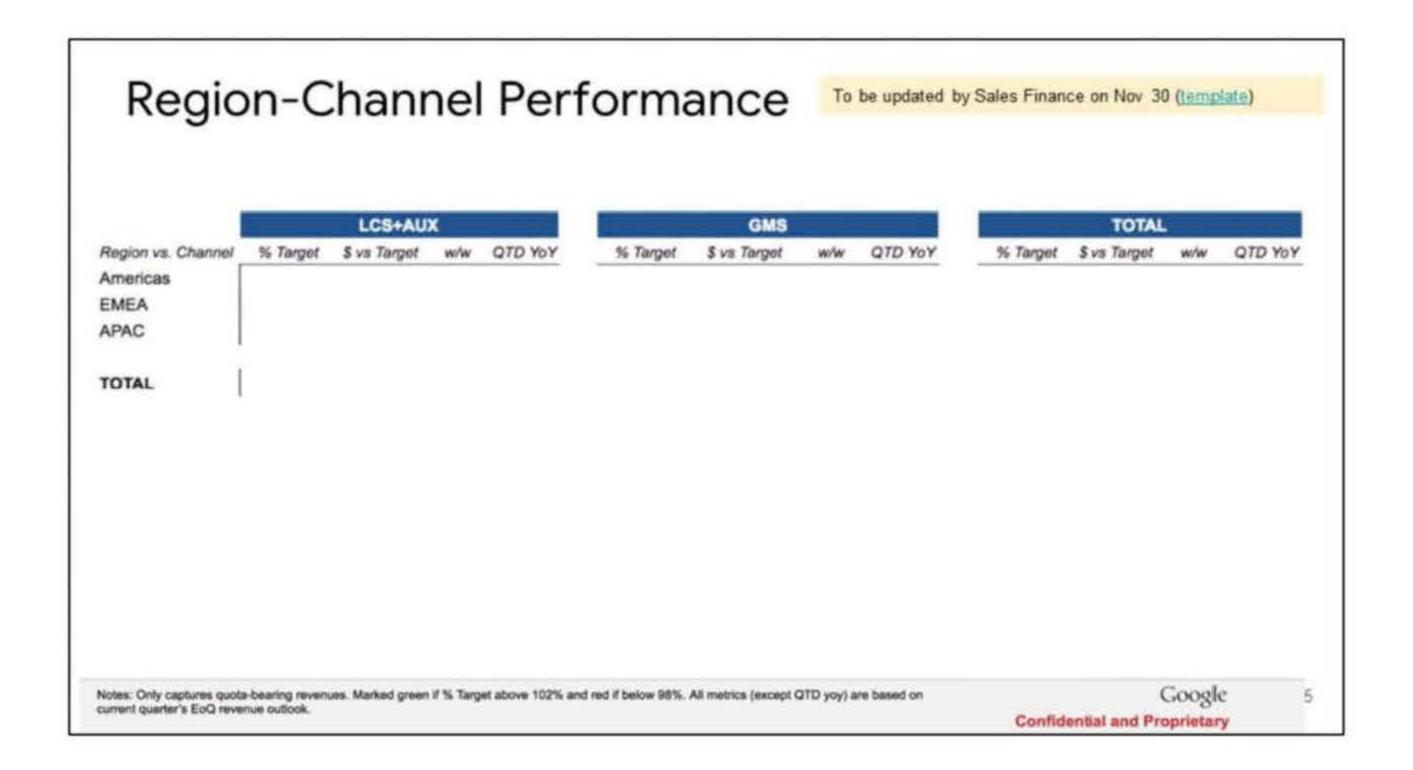
Top Product Asks Chris

Appendix

Proprietary a Confidential

Global Ads Performance Review





Sell side Performance Review

Proprietary + Confidential

Sell Side Performance Review

	Network Web			Network App			Network Video Content			Total Display			AFS + AFD			Total Sell Side Revenue		
March 5 - June 2	Rev	Rev YoY	MQ	Rev	Rev YoY	Imp	Rev	Rev YoY	MO	Rev	Rev YoY	MQ YoY	Rev	Rev YoY	MO Yoy	Rev	Rev YoY	MQ YoY
LPS - Americas	\$428	12%	17%	\$129	61%	6%	\$64	26%	37%	\$621	21%	15%	\$434	-7%	-25%	\$1,055	8%	7%
OPG - Americas	\$659	7%	3%	\$235	26%	7%	\$37	38%	56%	\$931	12%	4%	\$24	17%	-1%	\$955	12%	45
Americas	\$1,088	9%	Č.	\$364	36%	7%	\$101	30%	39%	\$1,552	15%	7%	\$457	-6%	-24%	\$2,010	10%	.5%
LPS-EMEA	\$267	18%	7 17	\$48	103%	56%	\$34	37%	52%	\$349	27%	17%	\$165	-14%	-4%	\$514	10%	15%
OPG - EMEA	\$628	19%	3.4%	\$409	48%	22%	\$24	31%	425	\$1,061	29%	17%	\$53	20%	2%	\$1,114	29%	17%
EMEA	\$895	19%	13%	\$457	52%	25%	\$58	34%	47%	\$1,410	29%	17%	\$218	-8%	-3%	\$1,628	22%	16%
LPS-APAC	\$96	9%	14%	\$138	-26%	-18%	\$7	57%	101%	\$241	-13%	-4%	\$32	17%	72%	\$273	-11%	:4%
OPG-APAC	\$374	16%	8%	\$660	33%	12%	\$3	47%	106%	\$1,038	27%	9%	\$10	23%	-9%	\$1,048	27%	9%
APAC	\$470	15%	9%	\$798	17%	2%	\$10	54%	103%	\$1,278	16%	6%	\$42	18%	39%	\$1,321	17%	6%
LPS	\$791	14%	7.4%	\$315	9%	-5%	\$105	31%	42%	\$1,211	14%	8%	\$631	-8%	-16%	\$1,842	5%	6%
OPC	\$1,662	13%	9%	\$1,304	36%	75%	3 664	36%	54%	\$3,030	23%	773	687	20%	0%	\$3,116	22%	17%
Total	\$2,453	13%	10%	\$1,619	30%	10%	\$168	33%	47%	\$4,241	20%	10%	\$718	-5%	-15%	\$4,958	15%	10%

Web in transition from CT (0% Y/Y, 47% of rev) to mobile (+28% Y/Y, 53% of rev)

Apps still main growth driver (56% of growth), EMEA now fastest growing region followed by AMS

In stream video still small, but growing. 41% of growth driven by PG. Search highly concentrated (top 5 partners drive ~65% of revenue).

Total Video = \$692M (56% Y/Y) and it has 3 components: 1) \$34M in Web outstream, 9%y/y, \$2.8 CPM; 2) \$490M in Apps outstream, 70% y/y, \$3.2 CPM; 3) \$168M instream, 33%y/y, \$8.9 CPM

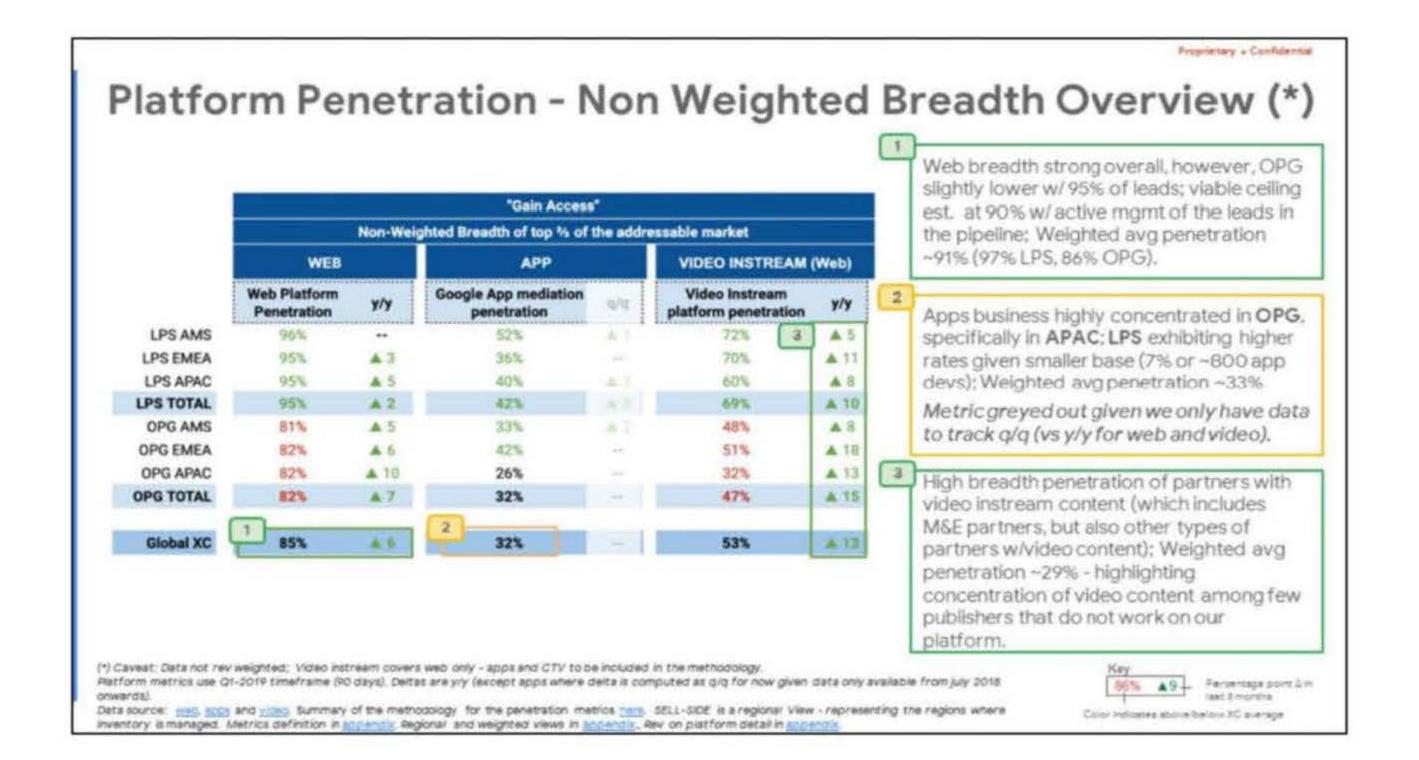
Metrics use March 5 to June 2, 2019 time frame (90 days) and deltas compared to previous year. SELL-SIDE is a regional. View - representing the regions where inventory is managed.

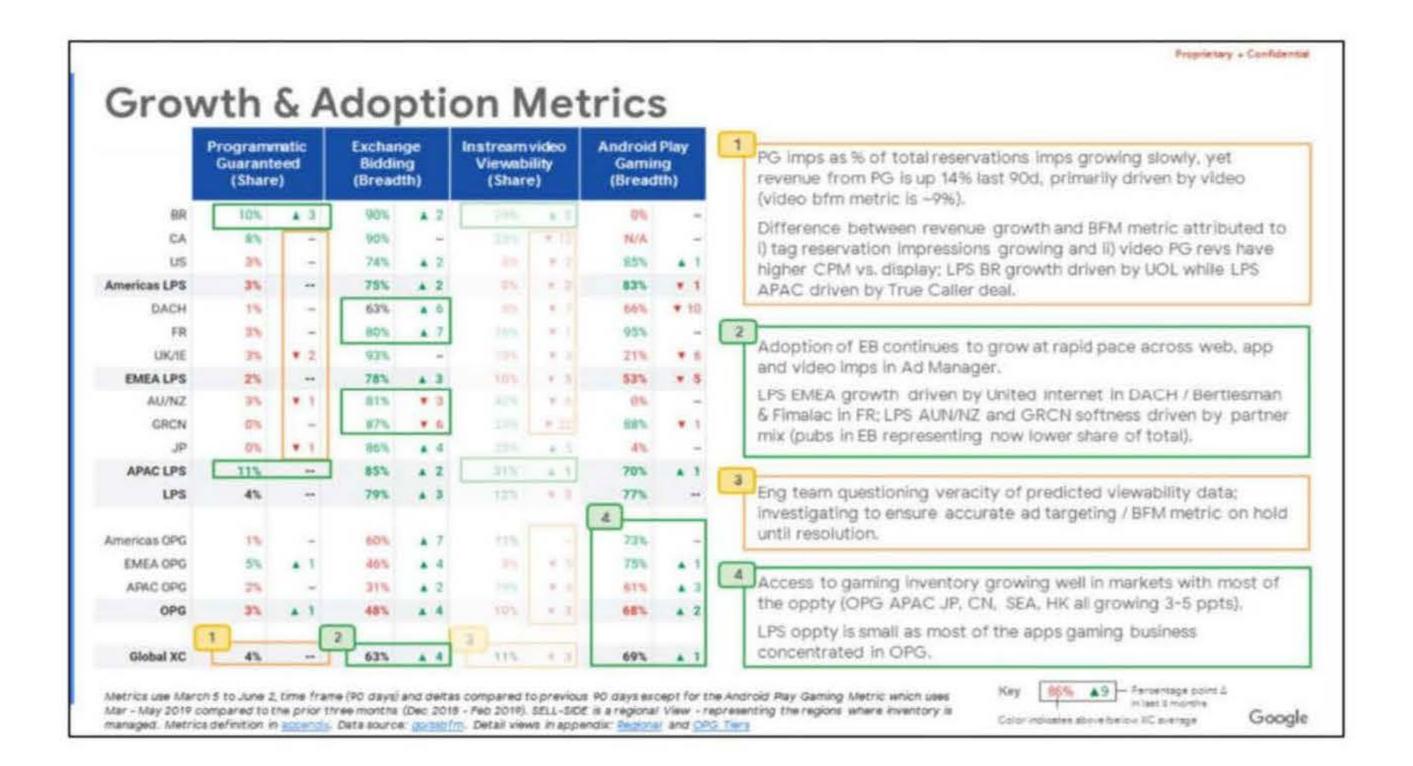
Network Video includes instream only (AdX Video & AFV); Outstream included under Web (AdX, Adsense) and Apps (AdX Apps, Admob). Details on appendix: https://doi.org/10.1016/j.com/includes-instream-children">https://doi.org/10.1016/j.com/includes-instream-children">https://doi.org/10.1016/j.com/includes-instream-children">https://doi.org/10.1016/j.com/includes-instream-children">https://doi.org/10.1016/j.com/includes-instream-children">https://doi.org/10.1016/j.com/includes-instream-children">https://doi.org/10.1016/j.com/includes-instream-children">https://doi.org/10.1016/j.com/includes-instream-children. Advance) and Apps (AdX Apps, Admob). Details on appendix: https://doi.org/10.1016/j.com/includes-instream-children. Advance) and Apps (AdX Apps, Admob). Details on appendix: https://doi.org/10.1016/j.com/includes-instream-children. Advance instream-children

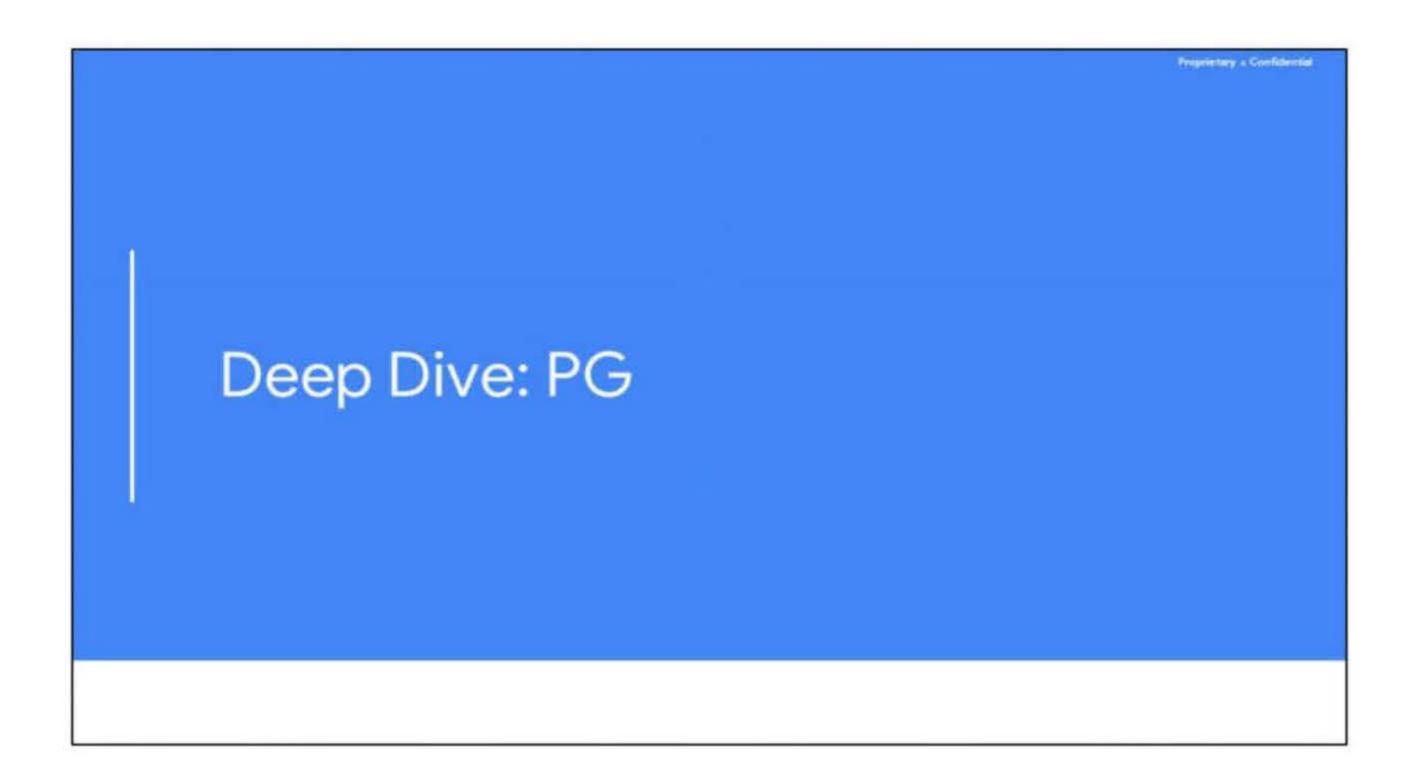
Countries

The property of the regions of the

Growth & Adoption Metrics







Proprietary + Confidential

Deep Dive Discussion: PG

Since last review (Aug 2018) PG growing but headwinds involved in jump-starting PG at scale

- O PG sellside growing at ~85% YOY but pacing ~20% below target of EOY goal \$897M
- O Difficulties proving product value relative to price (buy & sell) as compared to tag-reservations
- O Continued systemic challenges w/ agency business model limitations

Buy/Sell side:

What is the level of commitment to working with agencies and publishers to re-make the existing reservation market: what initiatives are planned to close the gap in each region and what are the main blockers seeing in each region? Has the inclusion of PG in DVIP enabled a faster adoption across media agencies?

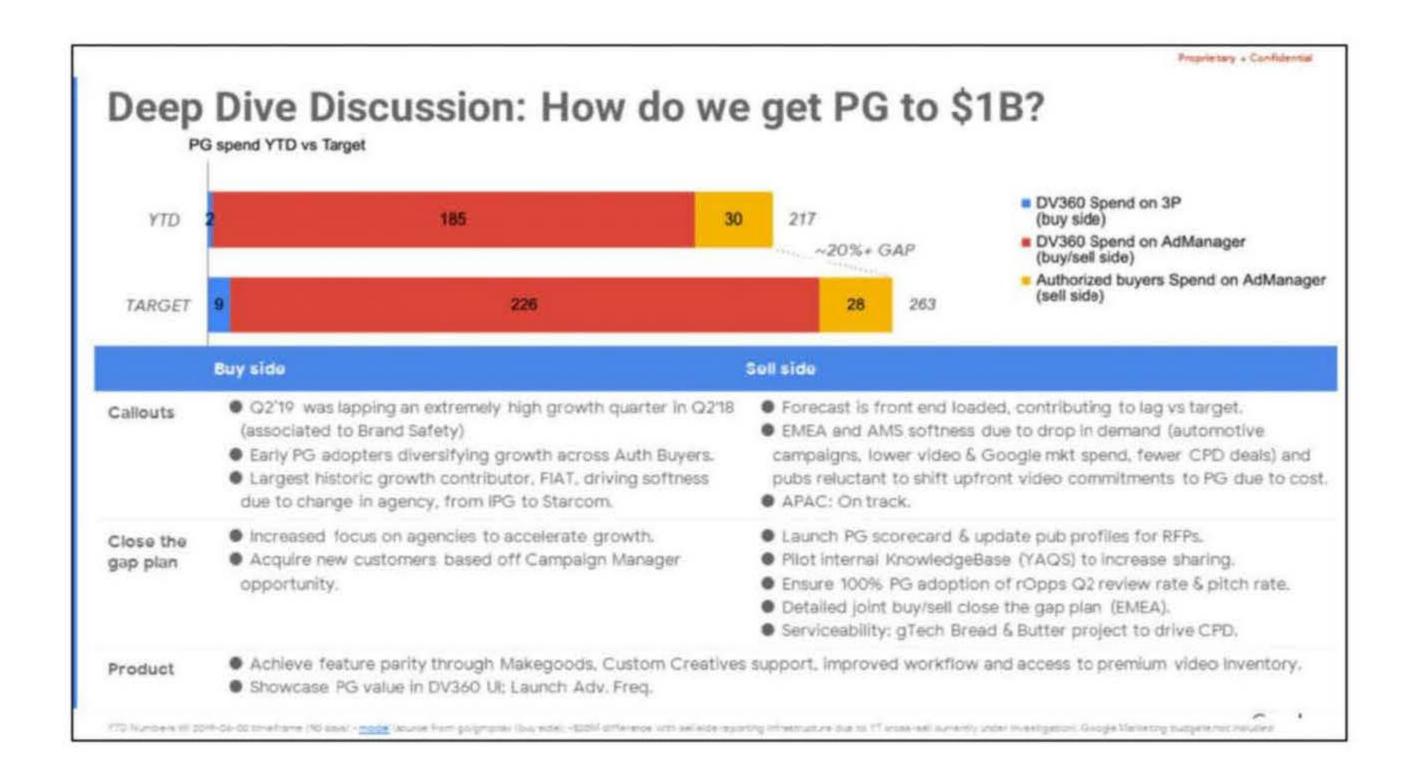
Google

PG Q2 SteerCo

Deals offsite

Review of PG Go to market plan

YTD Softness driven by lower spend of large auto advs (GM, Renault) and food/beverage (Mondelez, Starbucks). Pubs most affected Cox, Entrepreneur Media, Globe & Mail.



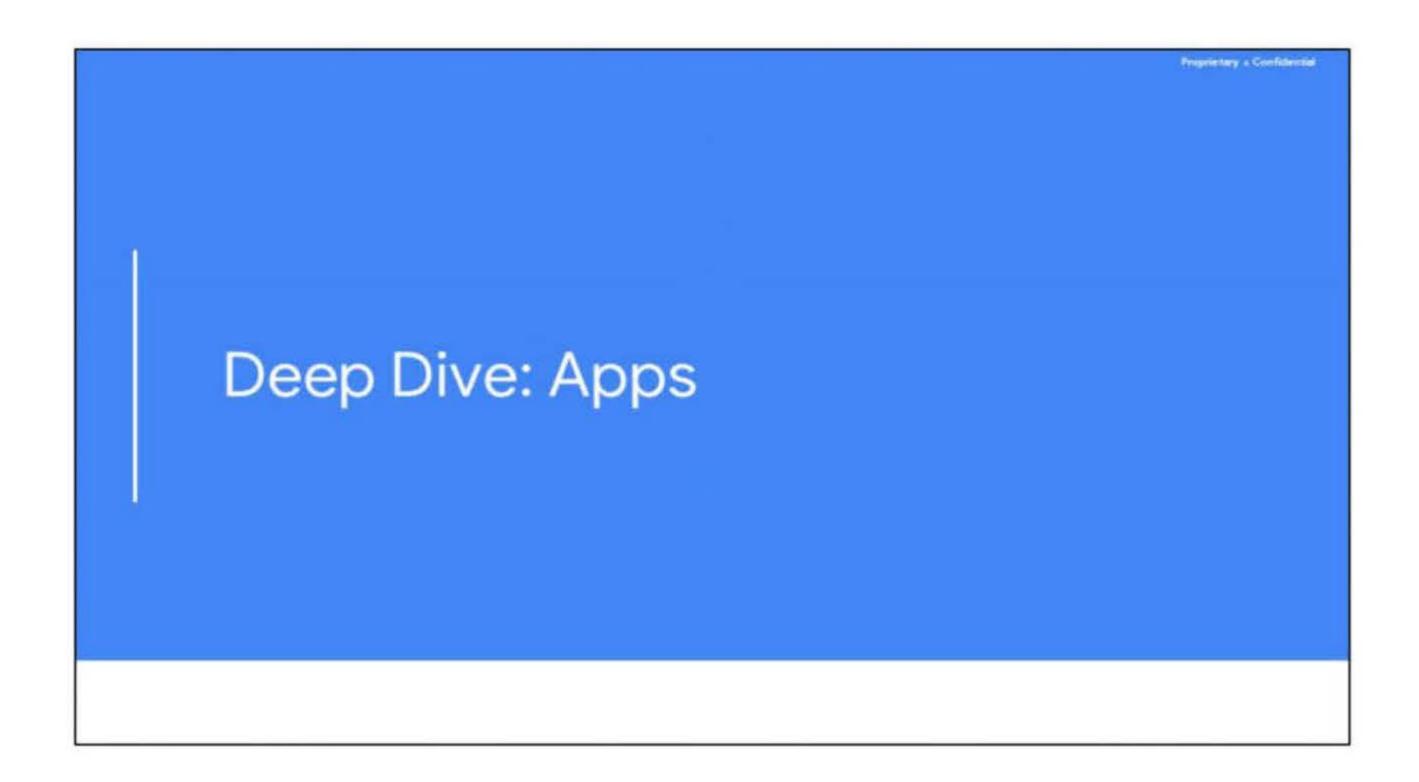
PG Q2 SteerCo Deals offsite

Hypothesis of "why is PG not growing":

- a) Cannibalization -> looking at global numbers it is inconclusive. However, anecdotal feedback of the new york times transferring OA into pg for EMEA users due to GDPR. If cannibalization is happening it is in specific pockets of inventory. Analysis: distribution of PG CPMs, if closer to OA CPMs could conclude certain amount of cannibalization happening
- b) Product readiness -> "unless adv can buy all direct through PG they will not move"
 - custom creatives just launched
 - DVC can be approved on a partner by partner level (to confirm by eow by should be the case)
 - rich media support and discovery is this one left and preventing the move of budgets?
 - serviceability -> has gotten better but still issue
- c) Org dynamics with agencies -> asymmetry of information, if value exists this

should be solved.

d) Lack of value -> flexible pricing (pubs asked by advs to lower the pricing)



Proprietary + Confidential

Deep Dive Discussion: Apps

Apps is one of the key levers of sell side growth expected to reach ~8B (41% y/y) by the end of 2019; Gaming specifically is forecasted to reach \$3.250B (47% y/y).

Sell side:

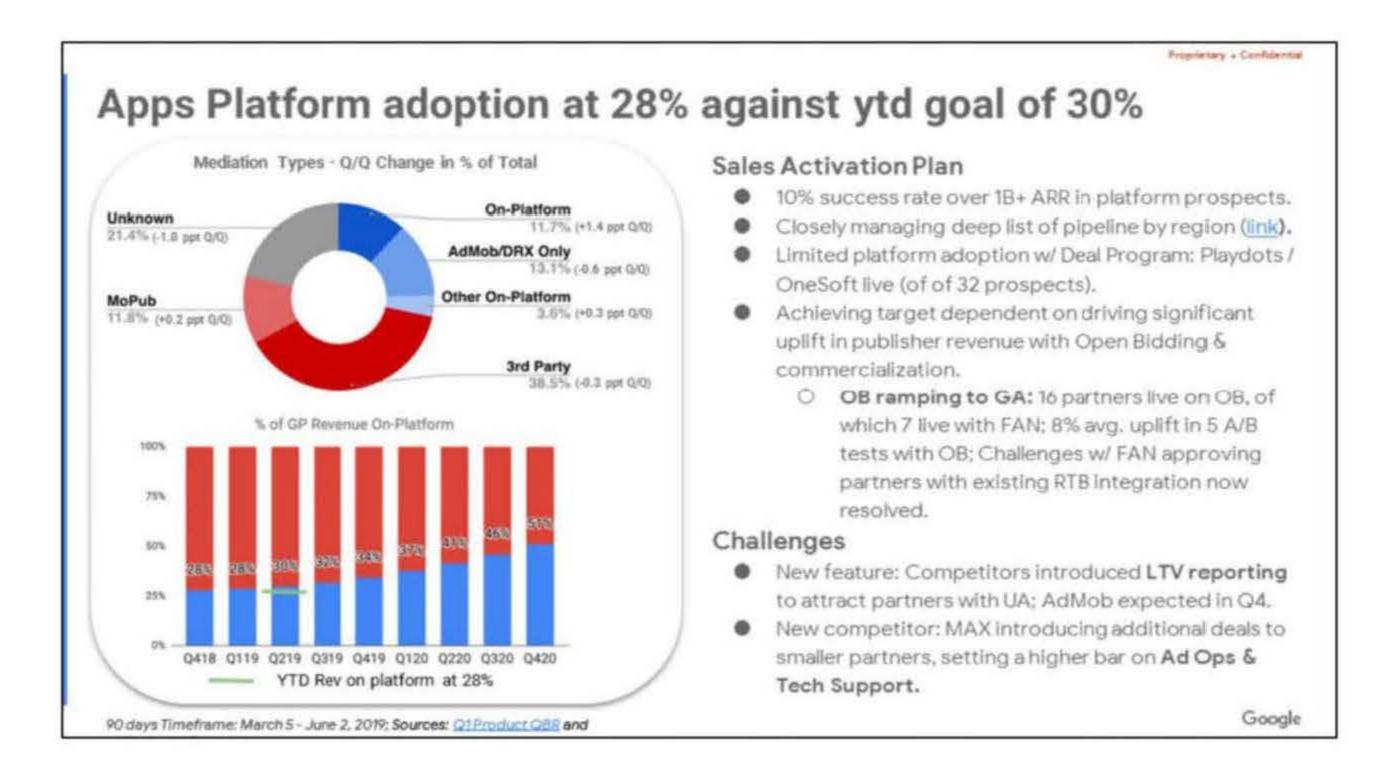
• When AdMob or AdManger is the mediation platform. Google demand has fair access to inventory and is optimally positioned to win. What strategies are you focusing on to grow the revenue on platform from 28%? What challenges and learnings have there been so far? As it relates to larger apps with proprietary ad servers, has Ad Connector (Yavin) proven to be an option to gain access to the pubs inventory?

Buy side:

-19% of Google Ads (non-UAC) and -13% of DV3 spend falls to our app network. With a \$15-25b addressable opportunity, and growing user time in apps, what are your plans to increase spend on apps inventory from non-UAC demand?

* We are excluding UAC from this discussion as the sales teams are unable to action increased network spend via UAC.

Google



EMEA pipeline source:

https://docs.google.com/spreadsheets/d/1PmMH2eNjFupk8JtJZgKGektRKeOWmO7i LuYmft34 1o/edit#gid=0

APAC pipeline source:

https://docs.google.com/spreadsheets/d/135r7uzEDinbK8HHZFUrg5I5_yE8OmI499V wjWvNAStw/edit?ts=5ceba497#gid=639338210

NA pipeline source: https://docs.google.com/spreadsheets/d/1YEiGDB Ld Ui54T-5elqsQ7H1Sm7sUoyh9l4iRjBCcY/edit#gid=0

Source	Revs (y/y)	% over total	Plan ahead					
UAC	627 M (17% y/y)	39%	UAC growing at ~51% but most of the growth being captured by Youtube (29% of total UAC growing at 63% y/y) and non-apps GDN (23% of total UAC growing at 91% y/y).					
Focus	of Discuss	sion	t) Removed opt-out option "goldmine" (increased share of apps revs from 26% to 33% and of budget available to app from 58% to 82%).					
			Investigating performance fixes to mCPC and eCPC bid strategies to remove throttling.					
Google Ads (non UAC)	720 M (28% y/y)	45%	 Investigating deprecation of 'Games' content exclusion (applies exclusively to mb games). 					
			4) Investigating deprecation or migration of App Categories.					
			 Launched initiatives to improve quality of traffic in App (App-First Formats and Targeting models). 					
DV360	143 M (82% y/y)	9%	Aggressively drive app opt-in (currently at ~50%; goal of 60% LIs within each NAL) as observed correlation with revs increase. Focus on extending web campaigns into App (not app promo)					
3P Buyers + Others	122 M (-1% y/y)	7%	Additional Exchange onboarding focused on app-heavy sources that materially improve ou access to inventory and incremental demand; bid denormalization and additional app-first formats (Rewarded, Native) are anticipated later this quarter					
TOTAL	1611 M (*) (24% y/y)		Slower growth than forecasted (41% y/y)					

UAC - <u>UAC 101</u>

Agnostic and most of the growth has landed in youtube - is there any product development missing on the sell side?

Google ads - Plan ahead:

- 1) Completed the apps control deprecation in January. This increased share of GDA apps revenue from 26% to 33% and increased % of GDA budget available to app from 58% to 82%. goldmine
- Currently investigating performance fixes to mCPC and eCPC in order to remove throttling on those bid strategies.
- 3) Investigating deprecation of 'Games' content exclusion (applies exclusively to mobile games).
- 4) Investigating deprecation or migration of App Categories.
- 5) Kicked off initiatives to improve quality of traffic for GDA in App via App-First Formats and App-First Targeting models.

DV360 app strategy & activation plan.

3P -

Network Bidding pipeline -

https://docs.google.com/spreadsheets/d/104_dm7vldnGXwrChlUylnXHZIVkdxGsCJZedM 1t6cS8/edit?urp=gmail_link#gid=842774972

Bid Flattening Comms doc-

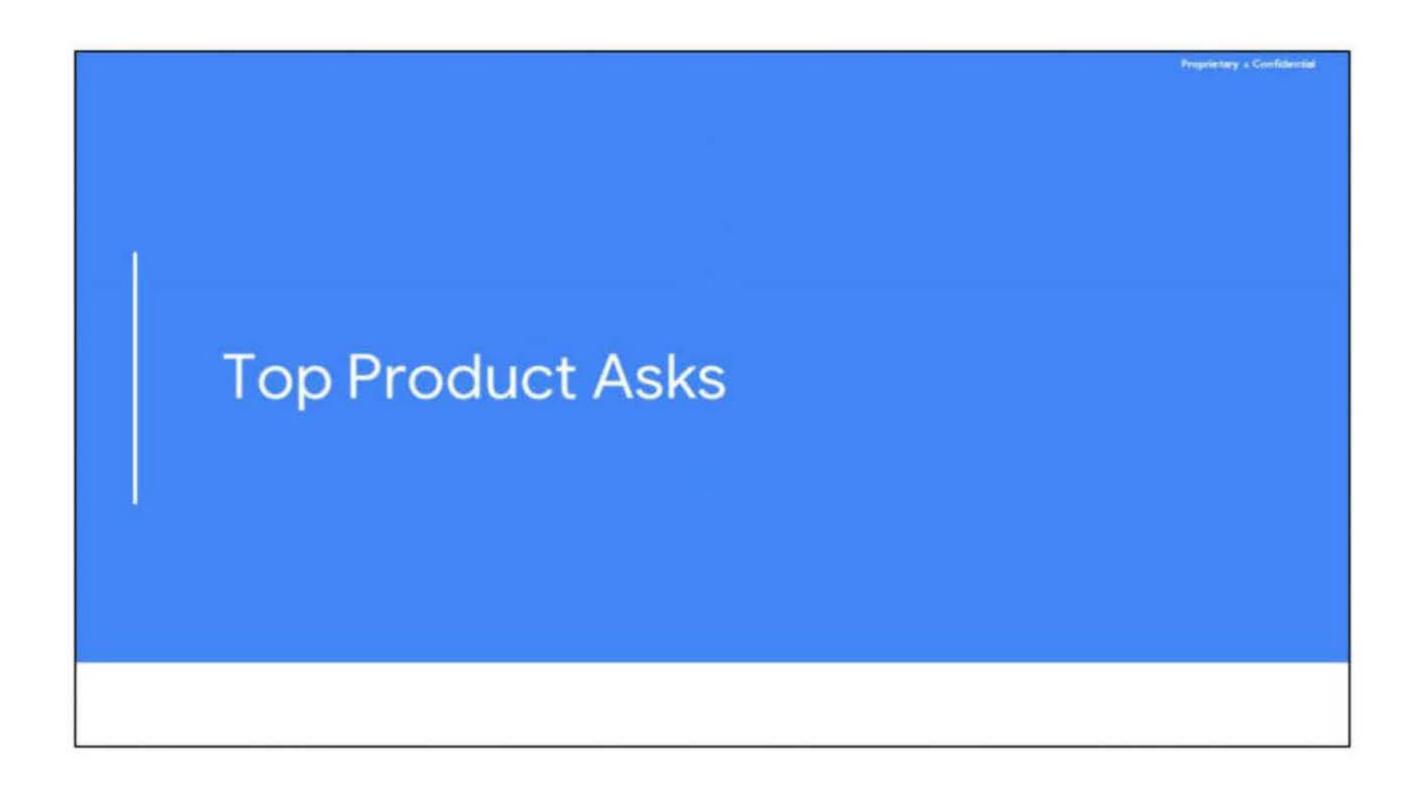
https://docs.google.com/document/d/1TpgsmQBwXxaFk0wa3Hqwko-LMy8HXyYGoB8PGsBzmnA/edit

Rewarded Video comms doc - https://docs.google.com/document/d/1CMR_UF-lsvTnB1omK0TuWPa9bKfYKnJ7loKgPxZS_xE/edit

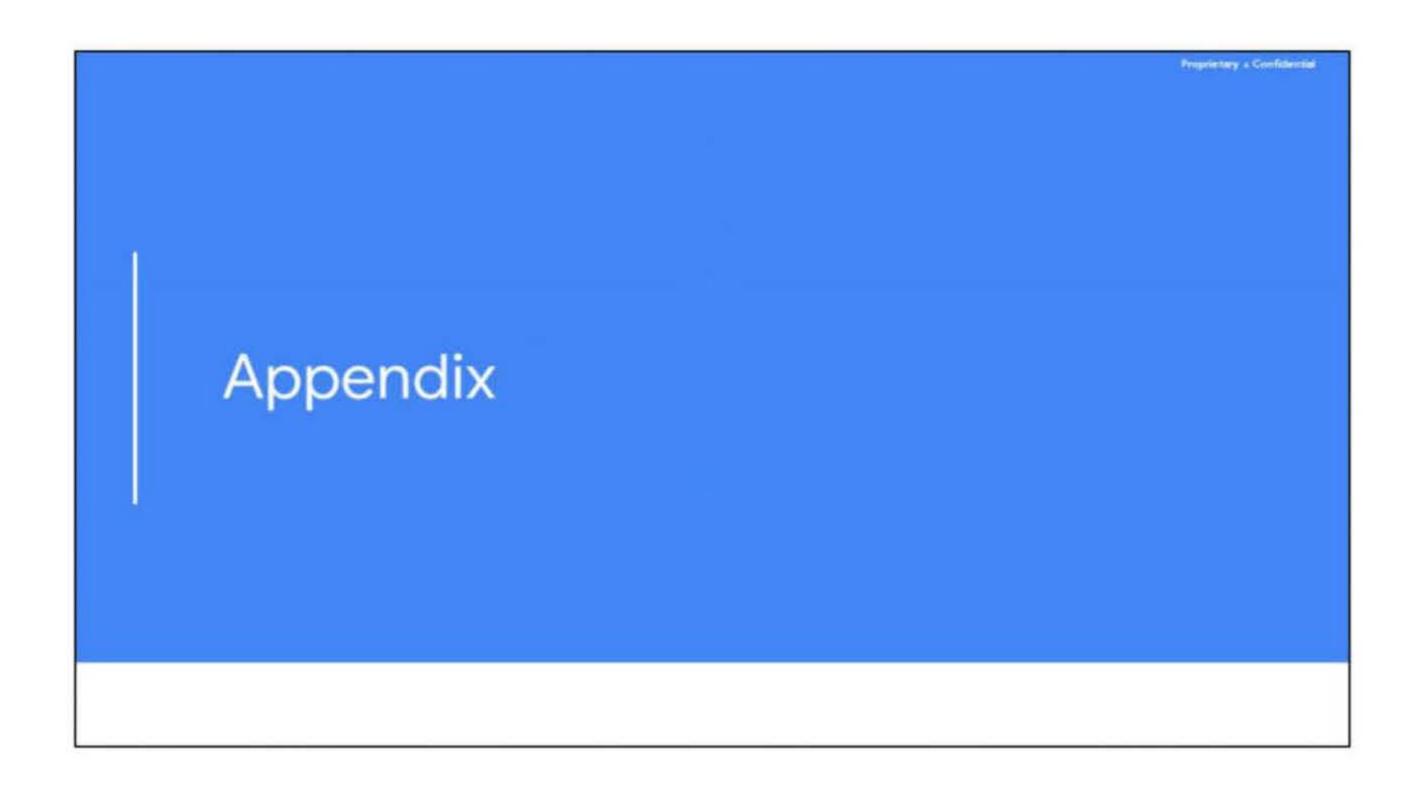
regarding native - checking on timing with Eng. On FAN:

https://docs.google.com/document/d/1g8Hi9BHQtm5JcnlZicFrlNrQts5a5VrN9W9hvioJn4

E/edit?ts=5ccb1b93



Status of Top Product Asks from Sales						
Product/Feature Requests		ETA	Availability			
▲ Google Audience (Demo, Affinity) in PG	Tested Google Demo Audience on 7 pubs in 1H 18 Original plan to tie Demo with Affinity and launch to 20 full stack strategic pubs at 20% revishare. Recent feedback has caused us to pivot to only launch for Disney as a self-side feature and evaluate pivoting to a buy-side feature available to all pubsibuyers.	Q1319 TBD	Disney			
Makegoods, buyer hosted creative support to improve parity	Makegoods (delayed from H1), buyer hosted creatives are on the 2H 19 roadmap	2H 19	Global			
Exchange Bidding (DRX)	EB in GA for DFP premium (web & app). Since last update in-stream video has also GAed. Sales is still asking for EB to be extended to all of Small Business (Ad Manager). Currently only certain Small Business pubs have been whitelisted. Plans for full Small Business roll-out are unclear.	Q4 19	Global			
▲ Open Bidding (AdMob)	Open Bidding (EB+NB on AdMob) transacting with 4 exchanges, 4 network certified 5 live, 2 in testing. FB is being prioritized but other demand ramps up slower than expected.	2H 19	Global			
Network Bidding (DRX & AdMob)	Signed 6 App network partners including FB. Taking longer to get pubsilive than expected. Issues with SIMBA have been flagged and are being worked on. Work with Jedi Blue is being prioritized/accelerated. Need better direction from product on whether networks currently serving as Authorized Buyers will have similar access opportunities, as Network Bidders.	2H 19	Global			
▲ DAI for Linear TV - linear addressable soln for TV distributors	Launched with Total Play (MX) in Q219, 2 additional POCs in progress for 2020 launch	02 19 Beta	Global			
Direct VAST Calls / Programmatic Access Library	PAL launched on web, IOS, Android, Android TV, Fire TV, tvOS, and is supported across -85% of video ad impressions (as of Apr'19). OA/PA/PD support on CTV devices is still TBD and a top priority for Product & Spam to resolve in 2H 19.	Q119 Beta	Global			
Higher Native CPMs via Video mprovements	MediaView to reduce fiction to be enforced as of 5/26/19. Ongoing experiments regarding platform effects of Native performance to be completed by EOQ2	Q219	Global			
Best practices for native implementation, to be promoted	Native templates Launched mid G2, designed to help publishers choose suggested implementations. In progress of building an effort to commercialize Native Dev Workshop (design)	Q4 18	Global			
Higher Rewarded CPMs via Incremental	Playable demand - Q4 GA, ongoing optimizations of TrueView demand, video CTD demand,	Q4.18	Global			
Rewarded SDK API update	Enable Rewarded API to prefetch multiple ads simultaneously; in closed beta, GA moved to Q1	Q2 19	Global			
A A A A A A A A A A A A A A A A A A A	Google Audience (Demo, Affinity) in PG Makegoods, buyer hosted creative apport to improve party Exchange Bidding (DRX) Copen Bidding (AdMob) Network Bidding (DRX & AdMob) DAI for Linear TV - linear addressable of for TV distributors Direct VAST Calls / Programmatic ocess Library Higher Native CPMs via Video inprovements Best practices for native inplementation, to be promoted Higher Rewarded CPMs via Incremental emand & optimizing existing demand	Tested Google Demo Audience on 7 pubs in 1H 18 Original plan to tie Demo with Affinity and launch to 20 full stack strategic pubs at 20% revishare. Recent feedback has caused us to private oriny launch for Disney as a self-side feature and evaluate phroting to a buy-side feature available to all pubsibuyers. Makegoods, buyer hosted creative apport to improve party Makegoods (delayed from H1), buyer hosted creatives are on the 2H 19 roadmap. EB in GA for DFP premium (web 5 app). Since last update in-stream video has also GAed. Sales is still asking for EB to be extended to all of Small Business (Ad Manager). Currently only certain Small Business pubs have been whiteletted. Plans for full Small Business roll-out are unclear. Open Bidding (AdMob) Cheen Bidding (EB+NB on AdMob) transacting with 4 exchanges, 4 network certified 5 live. 2 in testing. FB is being prioritized but other demand ramps up slower than expected. Signed 6 App network partners including FB Taking longer to get pubs live than expected. Signed 6 App network partners including FB Taking longer to get pubs live than expected. Issues with SIMBA have been flagged and are being worked on. Work with Jed Blue is being prioritized/accelerated. Nieed better direction fromproduct on whether networks currently serving as Authorized Buyers will have similar access opportunities as Network Bidders. Launched with Total Play (MX) in Q219, 2 additional POCs in progress for 2020 launch. PAL launched on web, IOS, Android TV, Fre TV, tvOS, and is supported across -BS% of video ad impressions (as of Apr19). OA/PAPP support on CTV devices is still TBD and a top priority for Product's Spain to resolve in 2H19. Higher Native CPMs via Video instructions for native inplementations, to be promoted. Page structions for native inplementations, to be promoted. Page additional POCs in progress of building an effort to commercialize Native Dev Workshop (design service) to global WATT accounts.	Tested Google Demo Audience on 7 pubs in 1H 18 Congle Audience (Demo, Affinity) in RG Tested Google Demo Audience on 7 pubs in 1H 18 Original plain to the Demo with Affinity, and launch to 20 full stack strategic pubs at 20% rev share. Recent feedback has caused us to plivot to only launch for Disney as a self-side feature and evaluate photing to a buy-side feature available to all pubsibuyers. Makegoods, buyer hosted creative Makegoods (delayed from HI), buyer hosted creatives are on the 2H 19 rounded has also GAed. Sales is still asking for EB to be extended to all of Small Business (all Manager). Currently only certain Small Business pubs have been whitelisted. Plans for full Small Business roll-out are unclear. Open Bidding (AdMiob) Copen Bidding (EB-NB on AdMicb) transacting with 4 exchanges, 4 network certified E live. 2 in testing. FB is being prioritized but other demand ramps up slower than expected. Issues with SfMBA have been flagged and are being worked on. Work with Jed Blue is being prioritized Success Library Interview of the programmatic currently berving as Authorized Buyers will have similar access opportunities as Network Bidders. Direct VAST Calls / Programmatic currently being for PAL launched on web, IOS, Android, Android TV, Fire TV, IVOS, and is supported across—85% of video and impressions (as of April 9), OAPAPlay pupport on CTV devices is still TBD and at top priority for Product & Spam to resolve in 2H 19. Higher Native CPMs via Video progress of business control of Native performance to be completed by EOQ2 Native semplates Launched mid Q2, designed to help publishers choose suggested implementations, to be promoted Higher Rewarded CPMs via Incremental emand - Q4 GA, ongoing opstimizations of TrueView demand, video CTD demand. Rewarded SDK API update Each Rewarded SDK API update Tested Google Demo Audices on 7 publishers choose suggested Tested Google Apide and a control of the publishers choose suggested Playable demand - Q4 GA, ongoing opstmizations of TrueView demand			



[Apps/PG] BFM Overview (06/12/2019)

TL;DR: Sell-side BFM (6/24) with the goal of ensuring strong collaboration across buy-sell. Two deep dive topics: 1) PG - behind goal (80% of target) - discussion on how buy and sell sides are collaborating in market to drive shift in reservations from tags to PG; 2) Apps - sell-side behind goal (30% y/y vs goal of 41%) - discussion on how to accelerate platform adoption and drive non-UAC demand.

Highlights & key call outs:

- Penetration Metrics:
 - Web breadth at 85% in LPS
 - Apps highly competitive (32% OPG)
 - Good progress on video at 53%
- Product adoption metrics:
 - PG: Revenue growth sufficient, but depth metric (PG imps as % of total reservations imps) lagging as tag reservations continue to grow.
 - Exch. Bidding and Gaming breadth growing strongly.

For GTM Leads:

(i) What is potentially controversial that GTM Leads should be aware of?

- PG value prop relative to price points is not clear for adv/pubs, resulting in slow adoption. Coordinated efforts to push PG across buy/sell required.
- Apps platform adoption growth is slow in face of competitive environment. Driving AdMob platform flips remains a sell-side sales priority, even as we await delivery of Open Bidding with FAN demand. Little progress done with top app players via demand-product (with possible need to tweak product/policy).

(ii) What would you like GTM Leads to provide input on specifically?

 Prepare senior sales stakeholders for discussion on coordinated cross functional regional plans to increase apps spend (buy) and platform adoption (sell side) and push flip of tags to PG (buy/sell).

Google

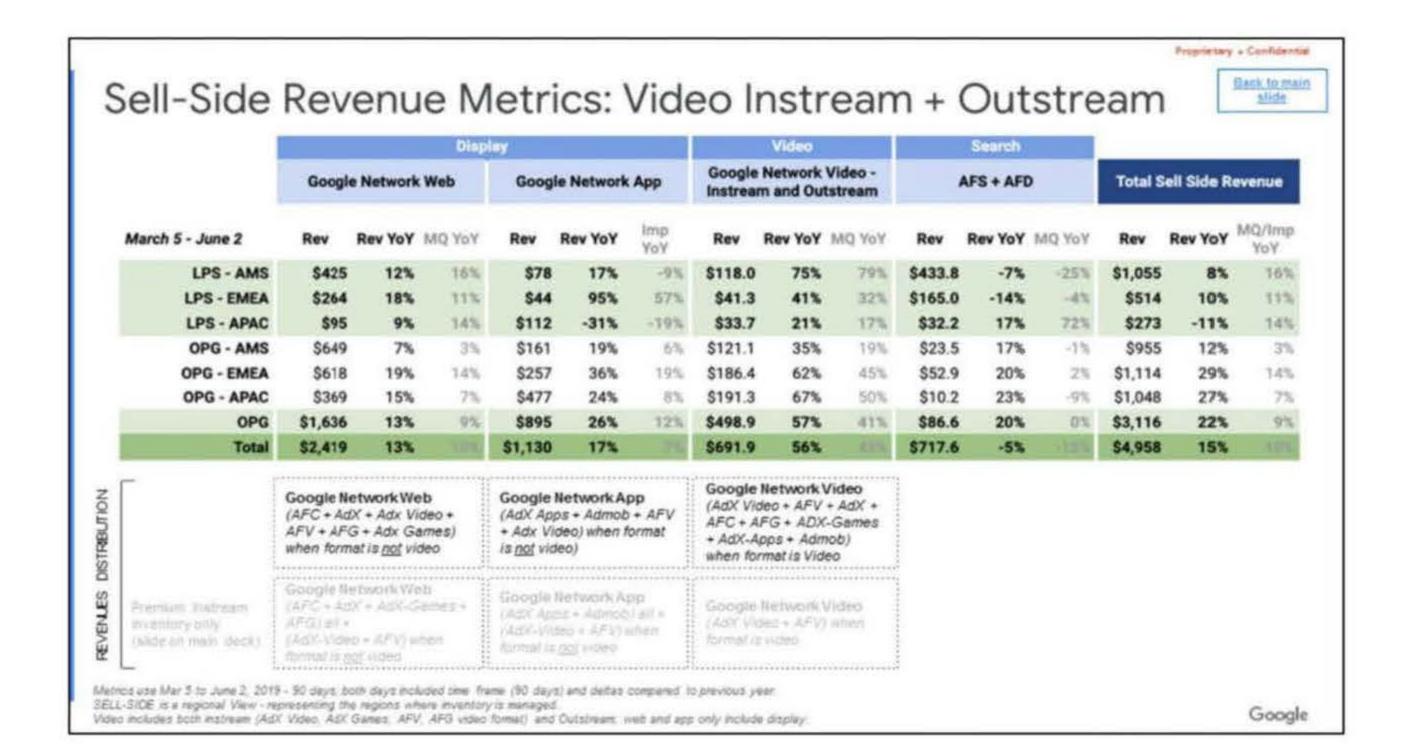
Proprietary a Confidential

Appendix - Performance review

Proprietary + Confidential Sell-Side Revenue Metrics: C/T and M split Elack to main stide Search Google Network Video Google Network CT Web Google Network mWeb Google Network App **Premium Instream** AFS + AFD Total Sell Side Revenue **Inventory Only** MQ/lm March 5 - June 2 Rev YoY Rev **Rev YoY** Rev Rev YoY Rev YoY Rev YoY **Rev YoY** YoY YoY YoY YoY YoY YaY LPS - AMS \$433.8 \$245.9 1% 31% \$129.0 61% 6% \$63.7 26% 17% 514 \$182.5 32% 31% -7% -25% \$1,055 \$107.9 LPS - EMEA \$159.3 6% 0% 40% 29% \$48.4 103% 56% \$33.7 37% B2% \$165.0 -14% -4% 10% 11% \$514 \$273 LPS - APAC -10% -7% 27% 21% -26% 78% \$7.3 57% 101% \$32.2 17% 72% 14% \$38.0 \$57.9 \$137.5 -11% OPG - AMS \$306.9 -1% -3% \$352.4 15% 8% \$234.9 26% 7% \$37.0 38% 56% \$23.5 17% 47.% \$955 3% 12% OPG - EMEA \$294.3 2% 5% \$333.5 40% 22% \$409.0 48% 22% \$24.0 31% 42% \$52.9 20% 2% \$1,114 29% 14% OPG - APAC \$126.2 -7% 16% \$660.4 33% 47% \$10.2 23% 9% \$1,048 8% -5% \$248.2 31% 32% \$2.7 106% 27% \$727.5 -1% -110 \$934.2 27% 16% \$1,304.2 36% 16% \$63.7 36% 54% \$86.6 20% O'S. \$3,116 22% 9% Total \$1,170.6 \$1,282.5 29% \$1,619.2 30% \$168.4 33% \$717.6 -5% \$4,958 15% Metrics use Mar 5 to June 2, 2019 - 90 days, both days included time frame (90 days) and deltas compared to previous year. SELL-SIDE is a regional View - representing the regions where inventory is managed.

Video includes instream only (AdX Video, AdX Games, AFV, AFG-video format), Cutstream included under Web (AdX, Adsense) and Apps (AdX Apps, Admob).

Google



Proprietary + Confidential How is Sell-Side Revenue distributed across inventory Elack to main stide Search Google Network Video **Google Network Web** Google Network App Premium Instream Inventory AFS + AFD **Total Sell Side Revenue** Only MQ MQ/lenp March 5 - June 2 **Rev YoY** Rev **Rev YoY** Rev YoY Rev YoY Rev YoY Rev Rev Rev Rev YoY YoY YoY YoY Yor LATAM 31% \$2.1 15% \$1.1 49% \$0.8 -26% \$19 31% \$15.1 30% 60% 0% -44% 24% CA 5% \$20.2 5% \$5.3 48% 26% \$7.0 39% 62% \$0.1 -15% -8% \$33 16% 6% US \$393.2 12% 15% \$121.6 61% \$55.5 25% 29% \$432.9 -7% 25% 7% 15% 674 \$1,003 \$1,055 LPS - AMS \$428.4 12% 17% \$129.0 61% 6% \$63.7 26% 31% \$433.8 -7% -25% 8% 17% DACH \$73.3 14% 11% \$14.4 95% 53% \$0.9 -21% 18% \$79.6 -8% 175 \$168 5% 11% FR \$15.2 13% \$2.9 26% \$5.7 28% \$2.7 -37% \$26 8% -8% 49% -18% 2.5 -6% GB \$43.5 9% 19% \$6.7 57% 37% \$5.1 14% 72% \$4.7 -20% 13% \$60 10% 19% LPS - EMEA \$267.2 18% 11% \$48.4 103% 36% \$33.7 37% 52% \$165.0 -14% -45 \$514 10% 111 AU/NZ 70% \$2.2 9% 28% \$0.3 -32% 7% \$16.1 2% 5% \$2.4 18% -1% \$21 6% CN 40% \$4.9 6% 5% \$110.8 -34% -29% \$0.7 8% \$0.0 -100% -100% \$116 -32% 5% JP \$52.8 7% 10% \$3.0 30% 41% \$0.0 -17% -20% \$31.5 18% 102% \$87 11% 10% 9% TAN LPS - APAC \$95.9 14% \$137.5 -26% -18% \$7.3 57% 101% \$32.2 17% 72% \$273 -11% OPG - AMS \$659.4 7% 3% \$234.9 26% 7% \$37.0 38% 56% \$23.5 17% -15\$955 12% 3% OPG - EMEA \$627.9 19% 14% \$409.0 48% 22% \$24.0 31% 42% \$52.9 20% 2% \$1,114 29% 14% OPG - APAC 2% 12% 47% 23% -0% 27% 8% \$374.4 16% \$660.4 33% \$2.7 106% \$10.2 \$1,048 20% 9% \$1,661.7 13% 9% \$1,304.2 36% 15% \$63.7 36% 54% \$86.6 0% \$3,116 22% 33% \$717.6 15% Total \$2,453.1 13% \$1,619.2 30% \$168.4 -5% \$4,958 Metrics use Mar 5 to June 2, 2019 - 90 days, both days included time. frame. (90 days) and deltas compared to previous year.

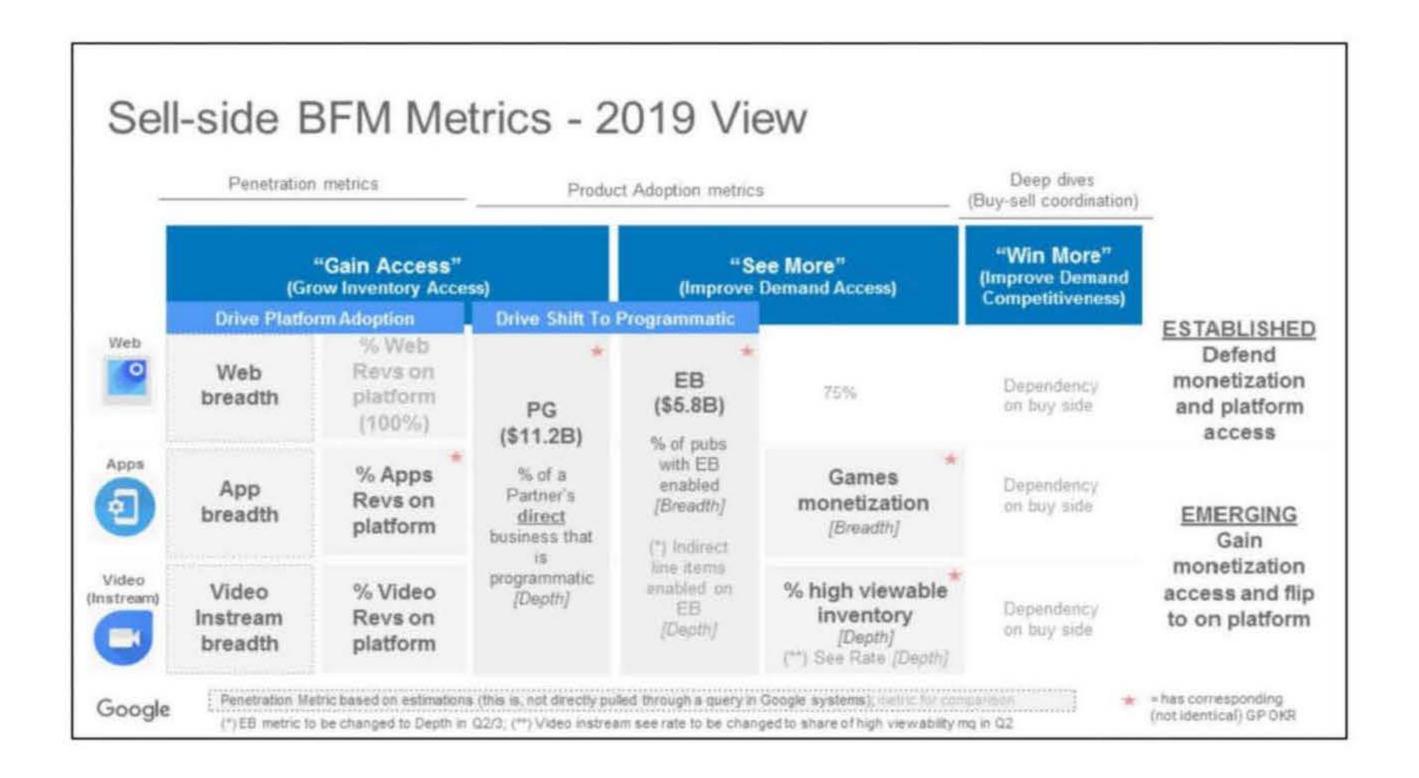
Google

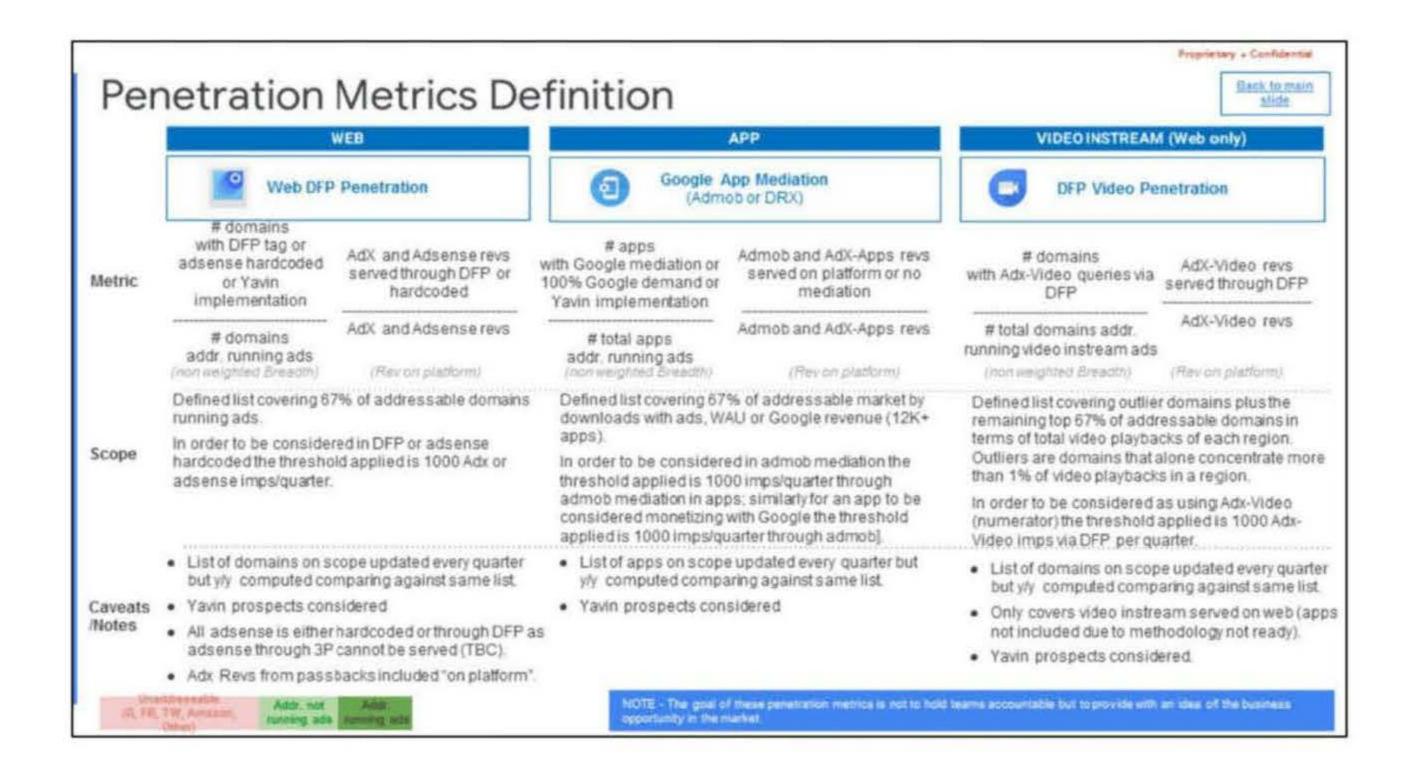
SELL-SIDE is a regional View - representing the regions where inventory is managed.

Video includes instream only (AdX Video, AdX Games, AFV, AFG video format), Cutstream included under Web (Adsense, AdX) and Apps (AdX Apps, Admob).

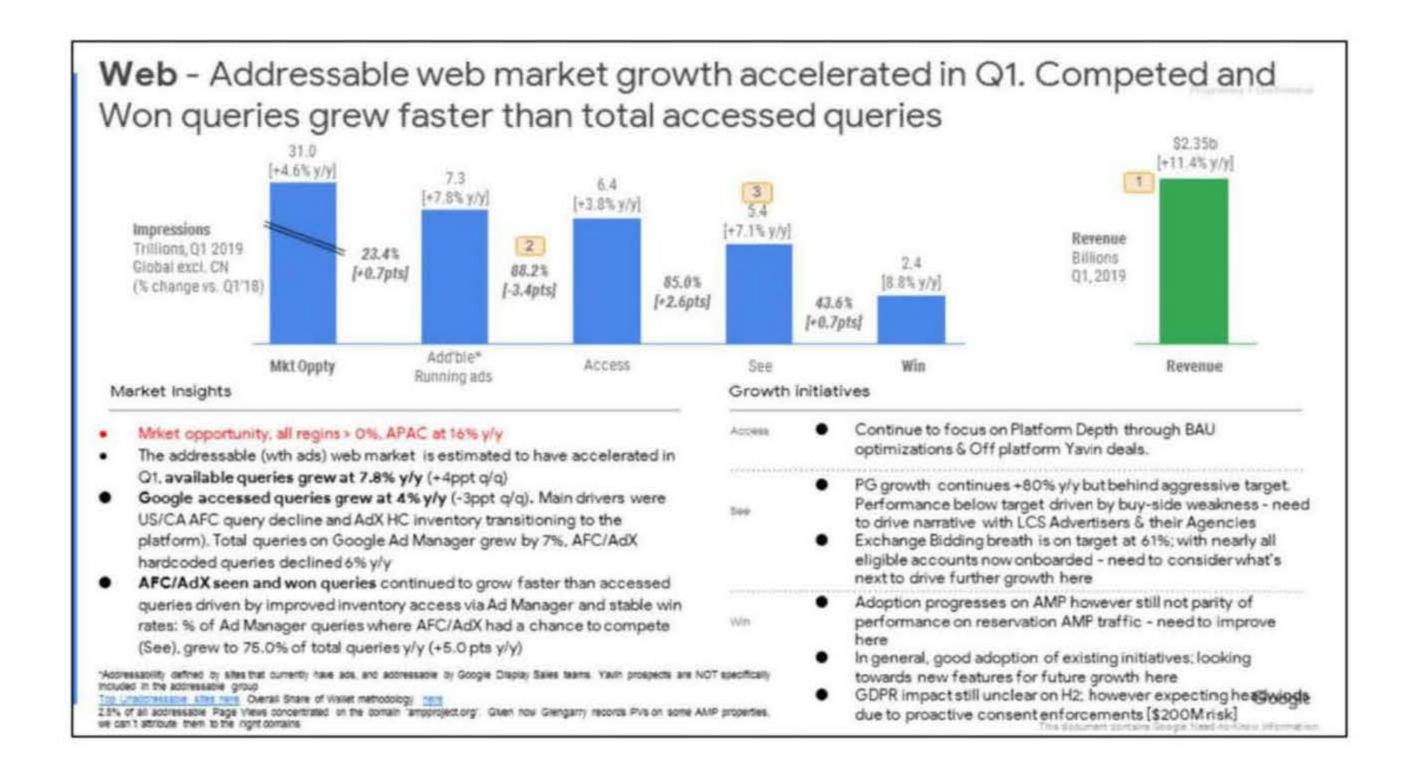
Proprietary + Confidential

Appendix - Penetration and Product adoption metrics





2018 priority OKRs to drive platform access: (70+ flips from Top 1000 pubs; 1000+ SoV optimizations) - OPG only OKR



Sandra

Source: https://docs.google.com/spreadsheets/d/1T9vyRhe59ESVB3wm51EONBt-zgY1zRlfFlwRJOtfqgU/edit#gid=881369511

Explaining Chart

- Mkt Oppty = all traffic w/ assumption on #ads/page based on historic ratios
- Add'ble = Excluding FB, porn, etc.
- Access = On our platform (AdSense or DRX)
- See = We compete (so primarily excluding direct (ETC =)
- Win = Won impressions.

Q119 supporting notes:

- driven by PV growth in APAC and AMP sites (ampproject.org)
- APAC growth in addressable market concentrated in some sites: pixiv.net, livedoor.jp, syosetu.com, rakuten.co.jp (Japan), tribunnews.com (SEA)
- Domain ampproject.org drives 3.5ppt of the 7.8% y/y growth of addressable market. That domain consolidates queries from AMP sites
- Top gainers / losers (avito.ru, Dailymail.co.uk, coolmath-games.com) on access share (access share defined as the % of estimated ad impressions that Google accesses either via DRX or AFC)

Notes from Tim on Header Bidding:

HB's share of overall Ad Manager impressions is stable - in or around the 7 to 8% of overall impressions served mark. NA still has the largest penetration although is actually in decline.

Amazon are still the <u>biggest grower</u>, and Rubicon are making efforts to <u>step up their</u> <u>HB game</u>, but all in all we're at a comfortable point when it comes to HB. We expect some movements once we fully migrate to 1P and UPRs from late July.

Q418 supporting notes:

Addressable market growth accelerated vs. Q3'18: we have only seen acceleration in APAC - driven by Japan and somewhat concentrated (see list of top 100 sites - https://docs.google.com/spreadsheets/d/1B1S9xYbPNWXFD6TiFHViAwWS4 gUykXOo-MsufBUQ4so/edit#gid=0) This is to some extent correlated with AFC/AdX web query acceleration seen in Japan in Q4'18

Total DFP web queries grew a little under 11% Y/Y, with all regions growing more than 6% and APAC and LATAM growing the fastest. The main driver of total query growth was on queries where AdX competed (16% Y/Y), while non-competed-for queries grew around 1% Y/Y. For AdX competed queries, growth was driven by OA (contributing to 55% of the growth), followed by Third Party EB (18%). Third Party EB and PG were the fastest growing, both above 100% Y/Y. Within AdX OA, about 36% of the competed-for queries were EB eligible in Q4 2018 versus 16% in Q4 2017.

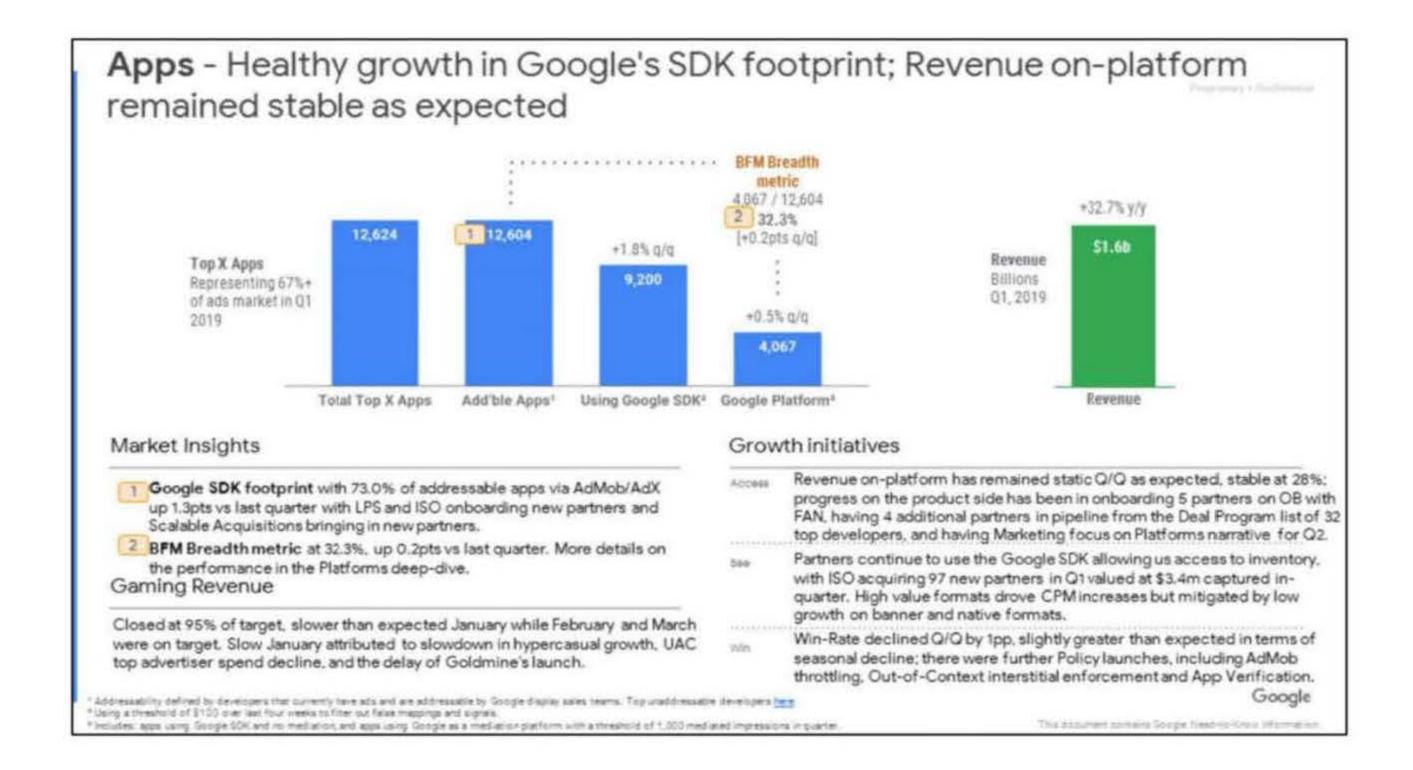
PG

- Programmatic G'Teed: 81% y/y growth, but trailing aggressive target.
 Performance below target driven by buy-side weakness (a few large auto clients slowing down PG spend)
 - Globally the partnerships teams are working with buy-side counter parts to activate use of pipes from large buyers/agencies. If demand does not ramp, pubs will have less incentive to move inventory into this deal type, so working closely with buy-side.
 - Additional resource from us not unlocking more, need to drive the narrative with LCS Advertisers and/or their Agencies

AMP

- AMP revenue parity split between OA and Reservations. Ads revenue on AMP in OA environment exceeds that of non-AMP, while reservation revenue on AMP pages are roughly half that of a non-AMP page
- OPG teams also have specific OKR to increase the % of ads queries

that originate from AMP pages

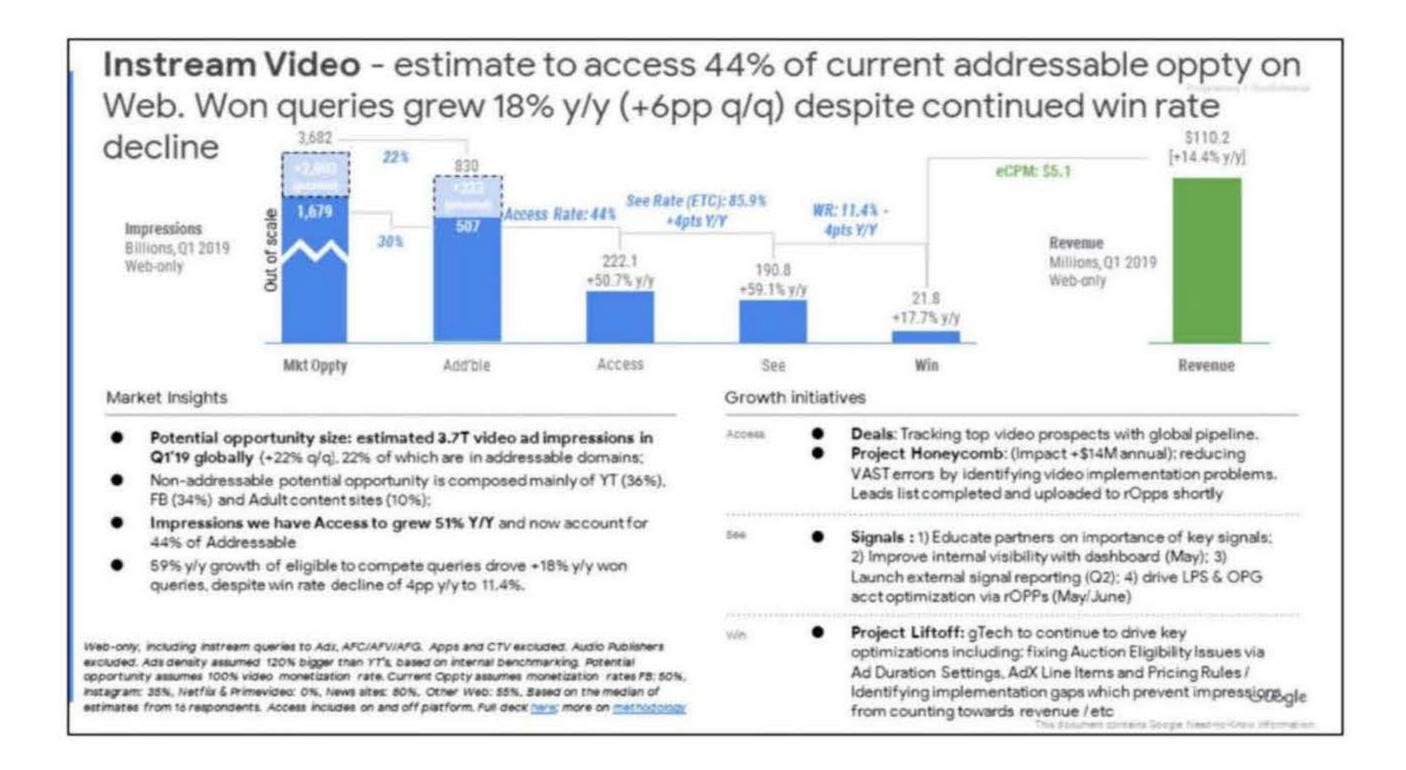


Zach

Revenue:

https://dasnav.corp.google.com/dnskv23s/#chart_type=bar_chart&dimensions=quota_ product:0&display_type=bar_display&end=2019-04-

01T00:00:00&granularity=day&growth=true&page=attainment&shift=P1Y&start=2019 -01-01T00:00:00&view=default



Julie

- dark blue are current opp assume monetization rate under 100% (level we think there is today based on todays mont rates which is an estimate)
- lite blue if all domains were monetizing at their full potential (ie all video playbacks have 1 ad) - lite blue = mont 100%
- access is everything that goes through platform (GAM) or adx
- see is what we compete for

For performance section:

Top line from go/gpnay* (same results as in zember@ trix) & last QBR. Next two bullets from this dasnay view & data here.

Commentary on top video partners -

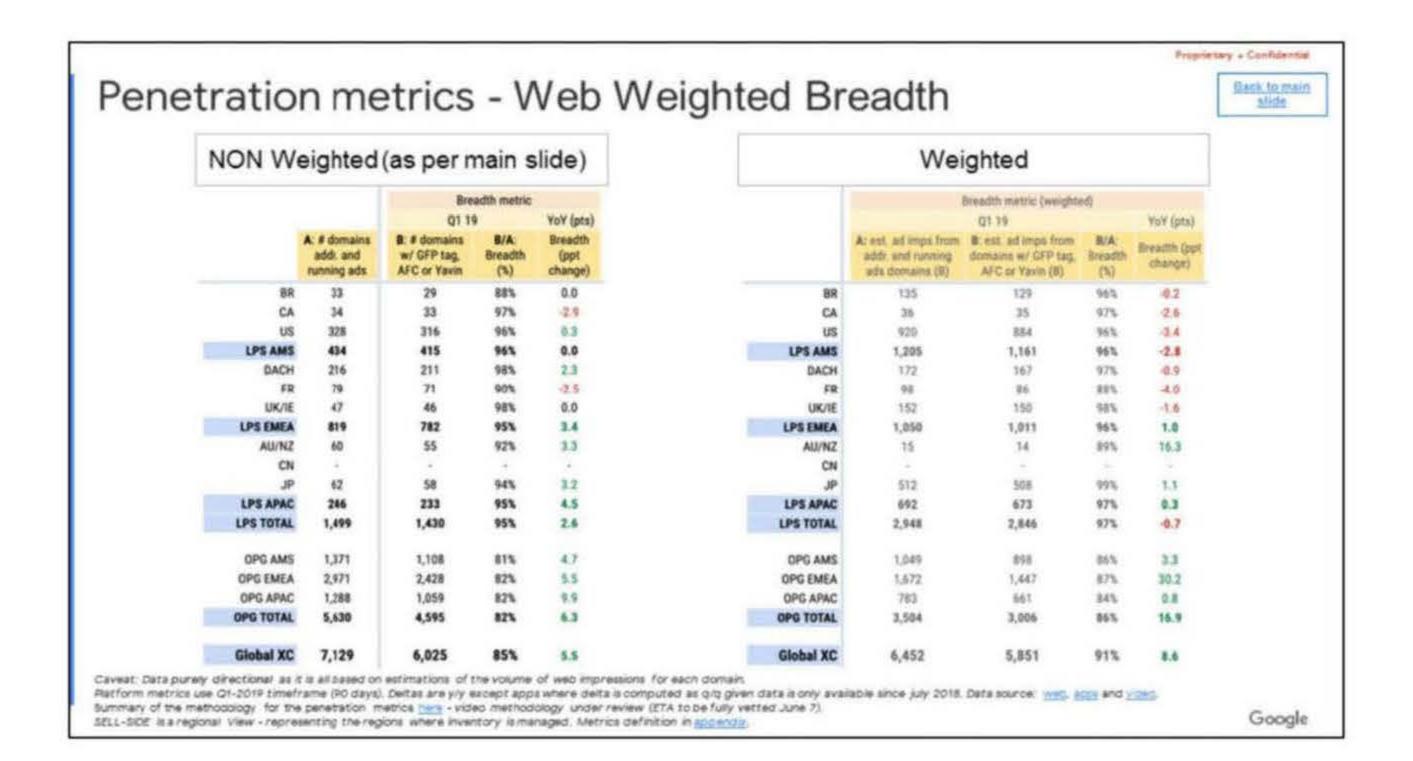
- For CBS Interactive it was all about Q4 PG spend when looking at video growth...PG grew from \$1.4M in Q3 to \$5.1M in Q4 2018. And when looking at y/y for Q4...PG again grew from \$1.7M in Q4 2017 to \$5.1M in Q4 2018.
- Pandora: Launched programmatic video support to GA in June 2018 and really scaled in Q3 and Q4 of this year, with PG Video being the main driver of growth.
- Spotify: Similar to CBS, the core of Spotify's video growth was centered around doubling down on PG video. They also launched PG Audio in Q4, which generally gets

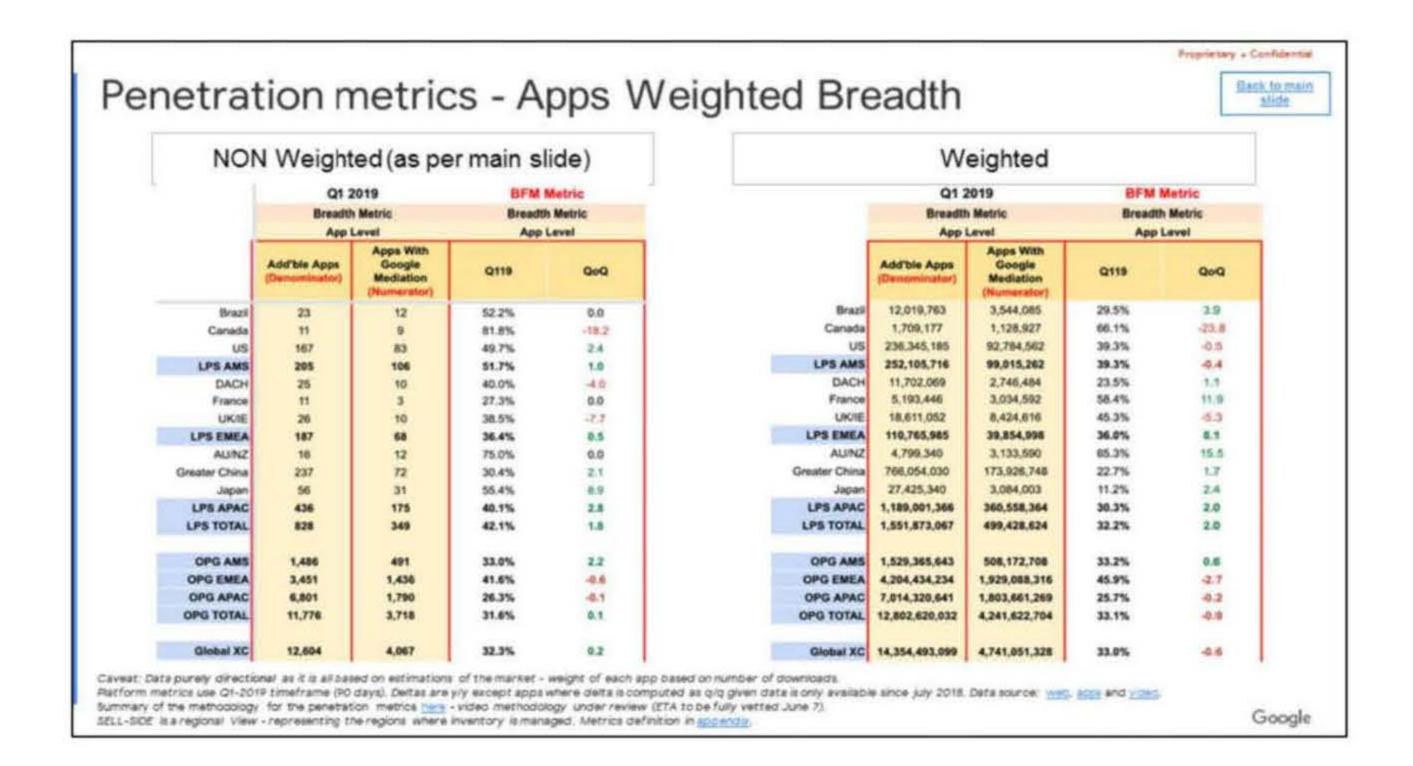
lumped into their video numbers.

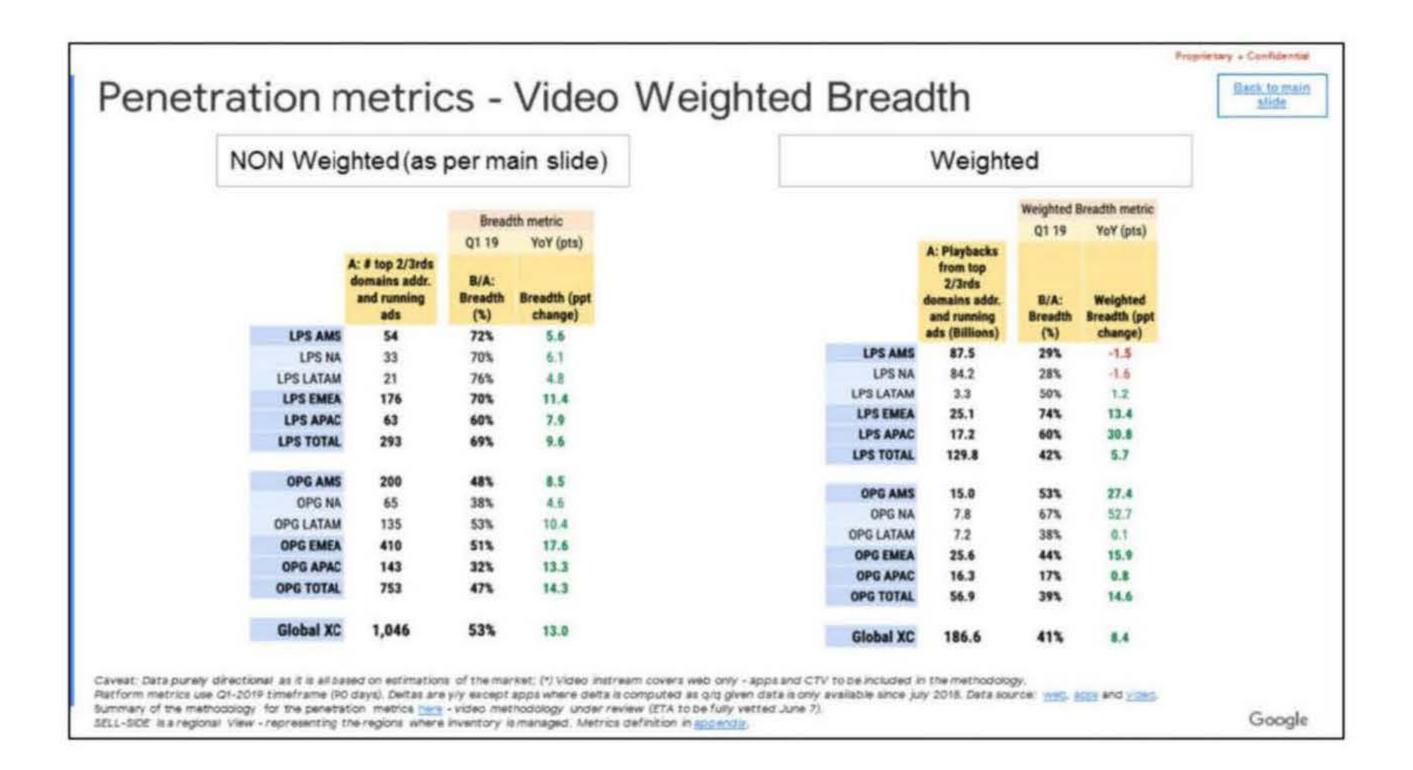
Warner Media:

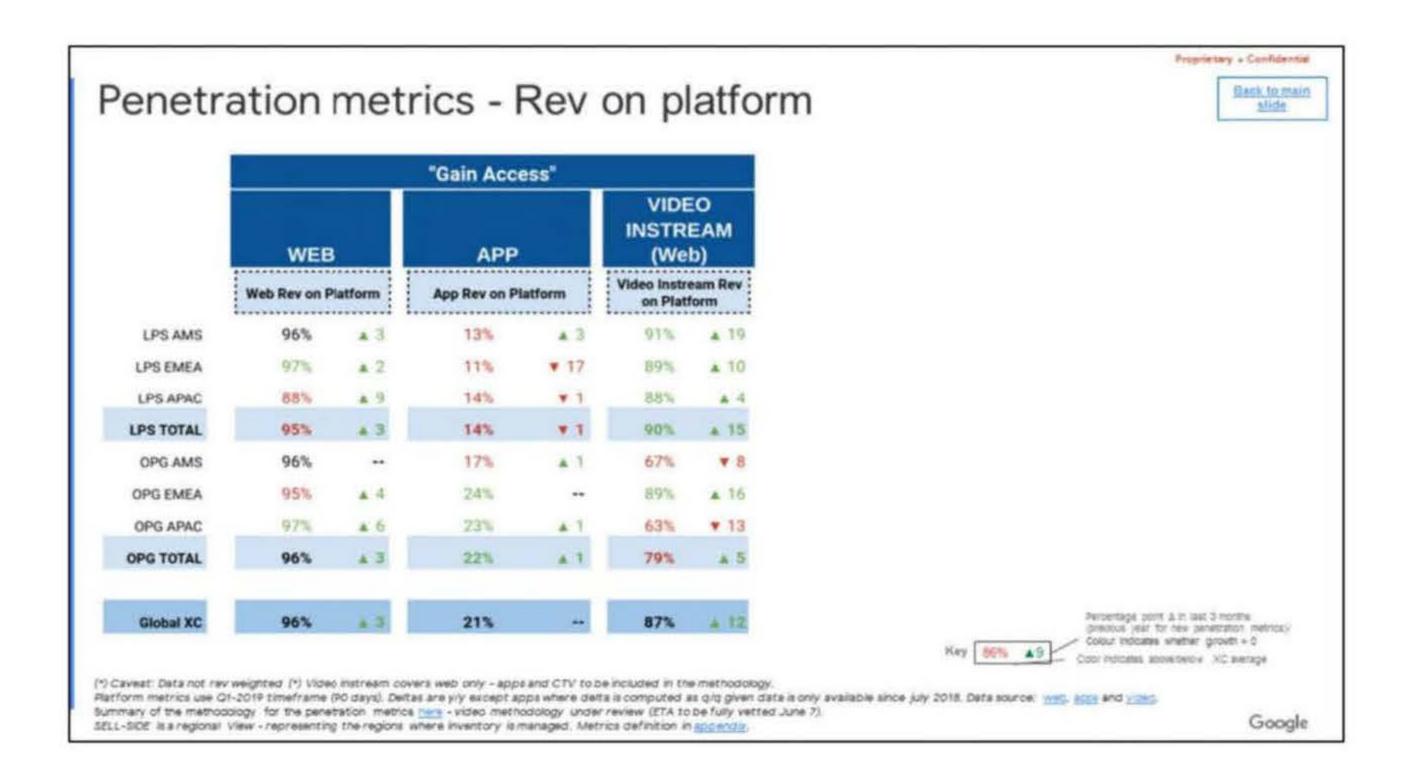
- Turner leveraging PG through Direct VAST Calls PG revenue increased from \$600k in Q3 to \$2.5 MM in Q4 and saw strong YoY growth as well from \$50k in Q4 2017.
- Seasonality for The CW. CW airs new content in Q4 (their shows are in hiatus all of Q3 and we don't see much activity). CW recorded strong YoY growth in Q4 led by PG. PG grew 600% YoY in Q4 from \$150k in 2017 to \$1.1 MM in 2018.

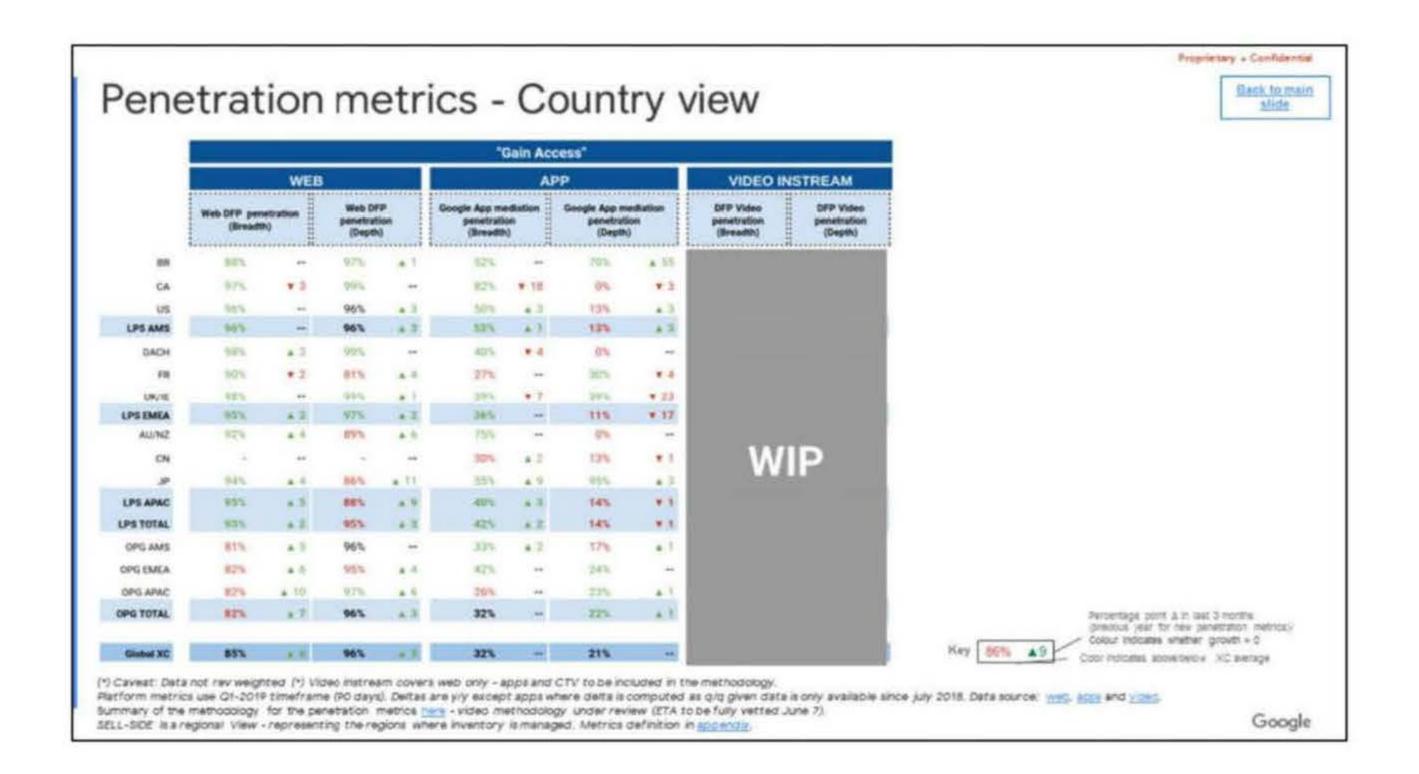
Draft for Bruno: XY% of the potentially addressable impressions opportunity sits on domains not considered "premium" (not broadcasters like X, Y and Z)

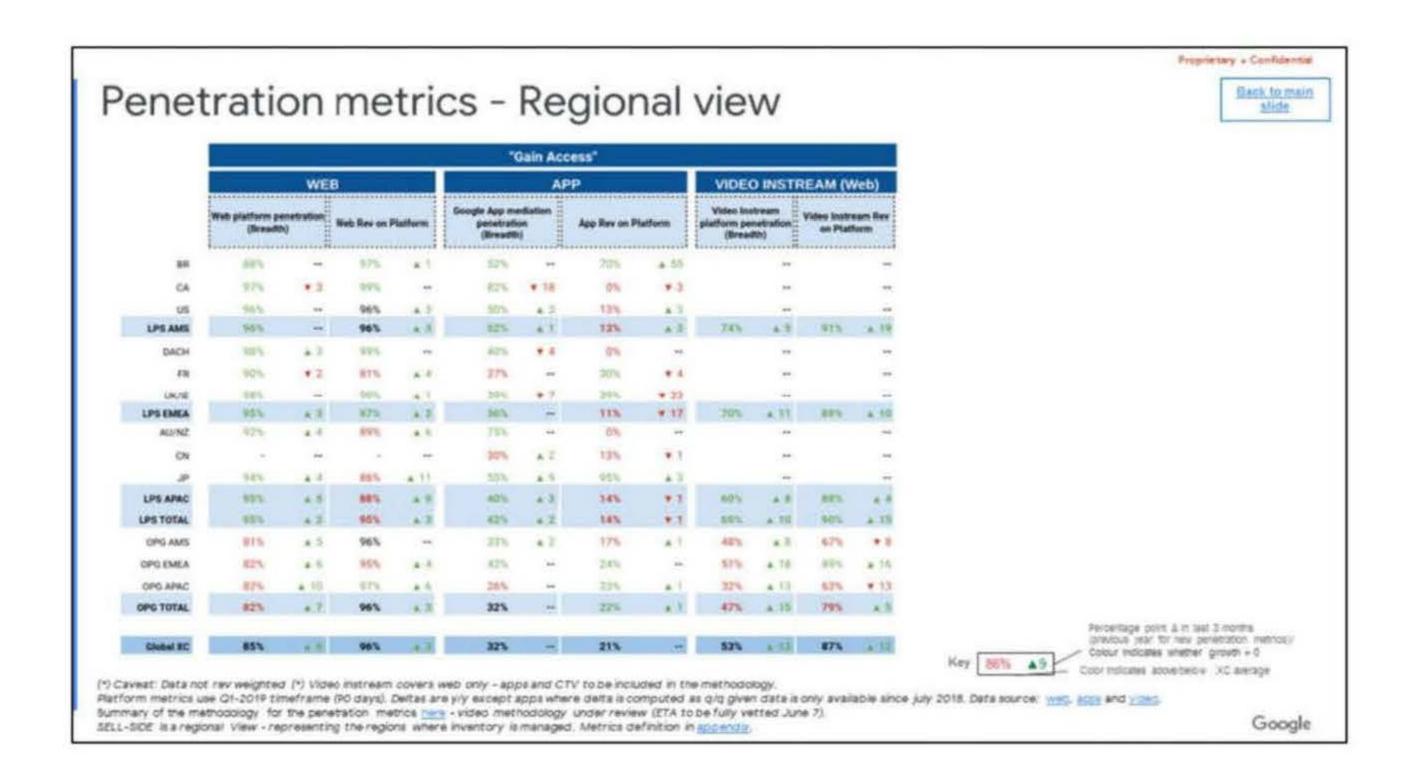




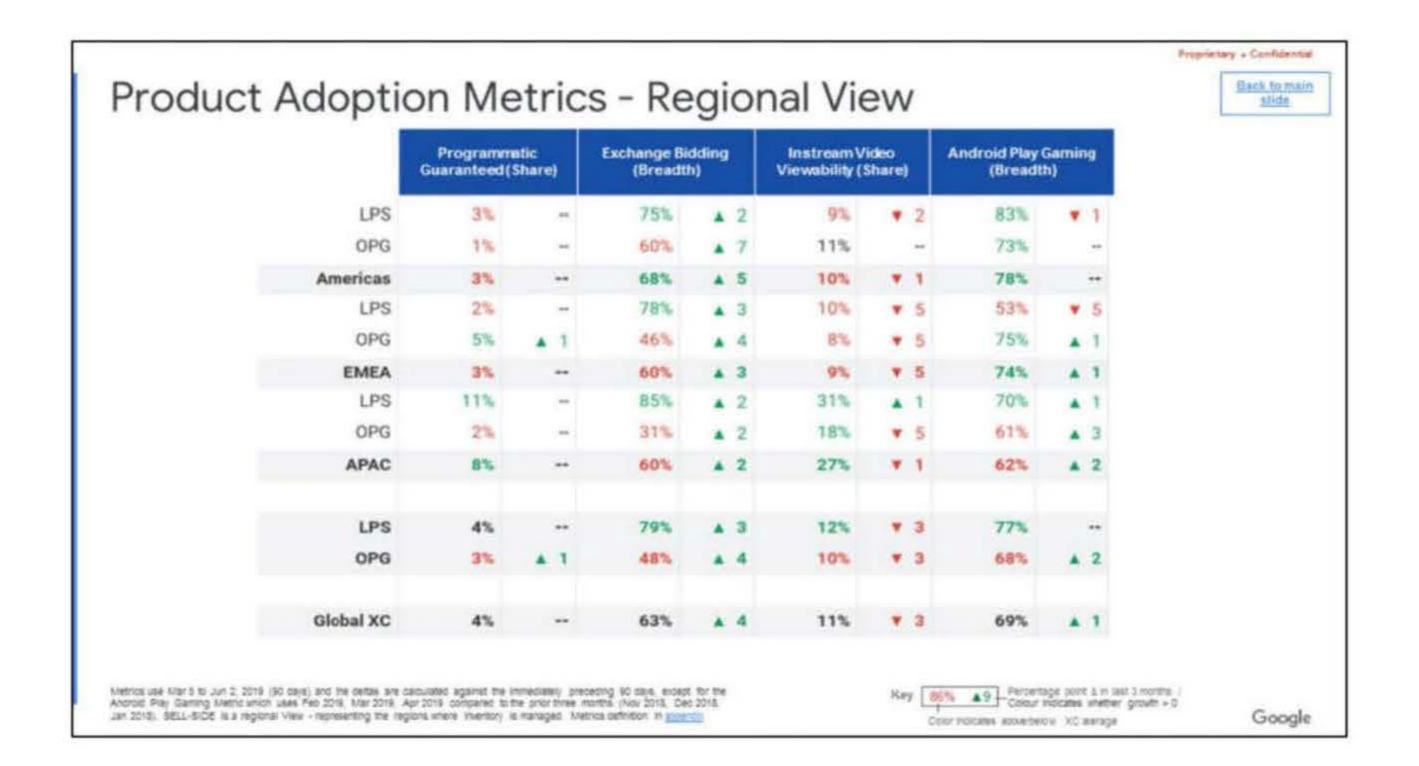


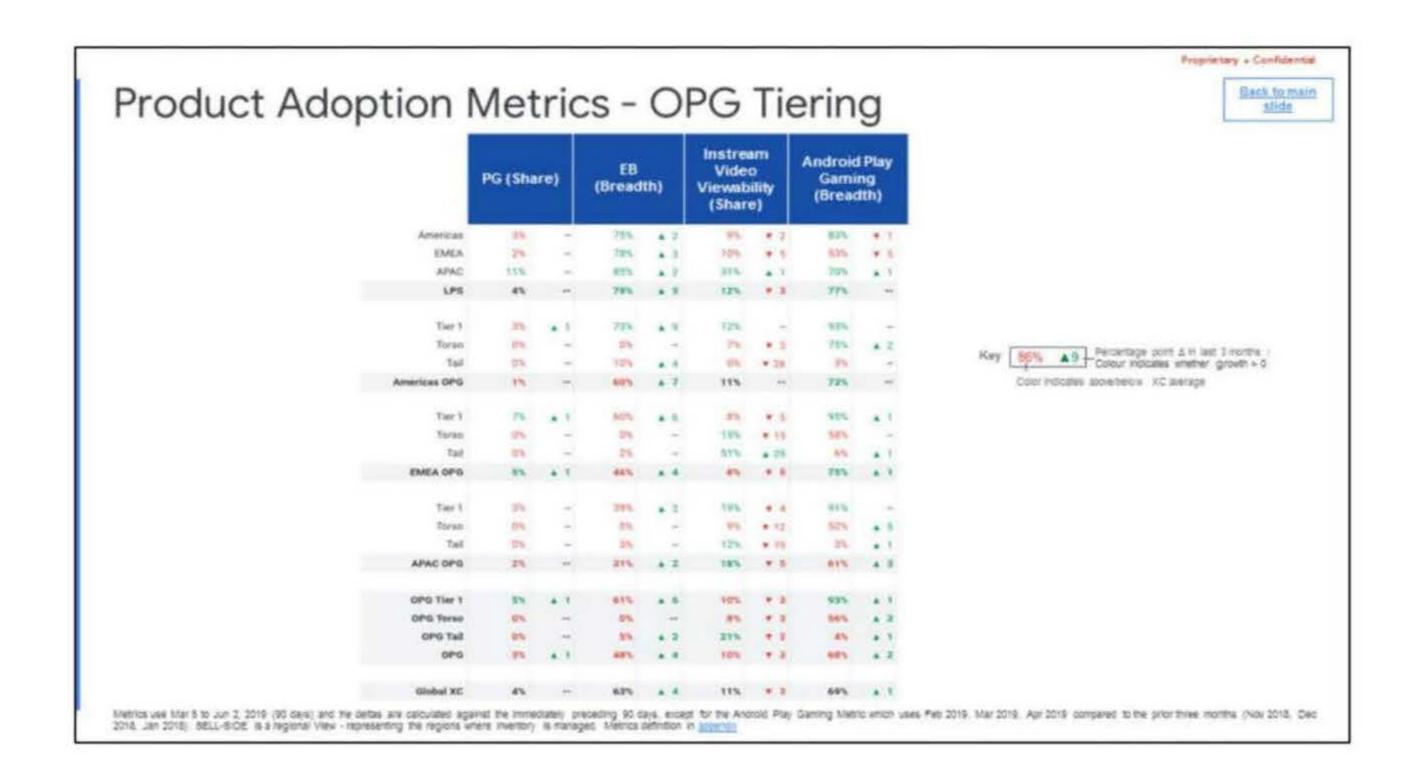


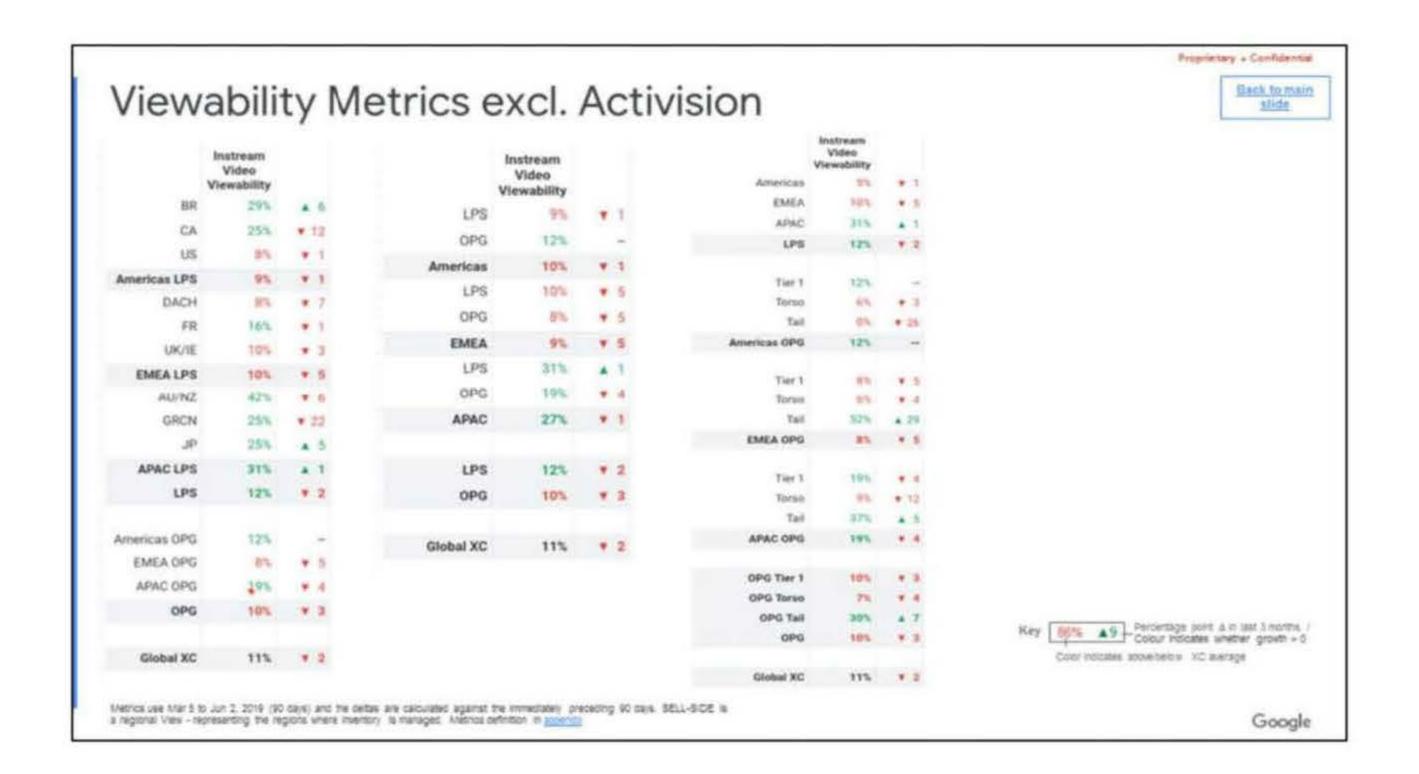




		Metric Definition	Ideal value	Notes	GP OKR *
- 8	Program. Guaranteed (PG)	# PG matched queries		Remaining 20% are formats not available (eg skins).	\$897M PG revs (107.6% y/y)
Acce		# Direct sales and PG matched queries in DFP of the partners who have served at least one PG impression	~80%		
	Exchange Bidding (EB)	# Indirect matched queries served in DFP by partners enabled in EB		DFP SB is initially not EB target although enabled as exception. 2019 GP Metric - will be	75-100% partner enabled
		# Indirect matched queries served by DFP	75%-100%		
		# EB eligible mg in indirect line items	100%		
"See More"		# mq of indirect line items	10018	used at BFM once breadth hits ~75%	
	Gaming apps	DAU of gaming apps in Android Play serving ads through Admob or AdManager	100%	Giving we are relying on Android Play data, DAU	\$3.250B Gaming revs (47% y/y)
		DAU of all gaming apps in Android Play		data can only be shown in aggregated	
	Video instream	Video instream q in AdX-Video with viewability => 90%	TDD 4608	It is expected to always have some low viewability inventory (can potentially be sold via DV360).	80% y/y growth of inventory with viewability =>80%
		All video instream q in AdX-Video	TBD - 100%		







Appendix - Deep Dive Apps

Proprietary + Confidential

Apps Platform adoption

		Rev. on platform	Platform depth	Sales Top Pipeline				
				# of targets	Opportunity	Testing	Flipped	
All		\$335.8M	27.74%	103	1710	3	32	15
OPG	AMR	\$37,8M	22.66%	30	280	1	10	3
OPG	EMEA	\$97.7M	29.06%	33	553	1	15	3
OPG	APAC	\$165.6M	28.26%	40	877		7	9

Google

EMEA pipeline source:

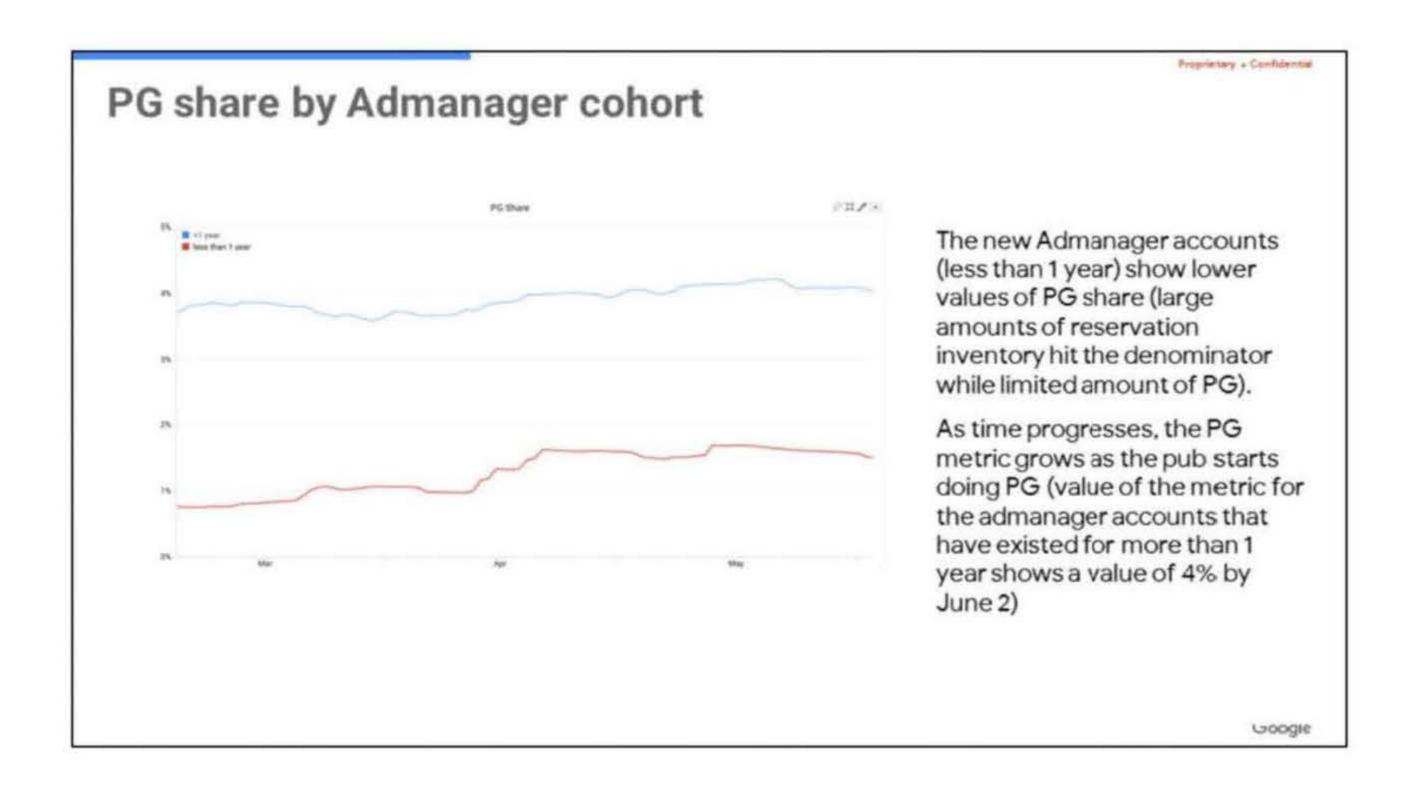
https://docs.google.com/spreadsheets/d/1PmMH2eNjFupk8JtJZgKGektRKeOWmO7i LuYmft34_1o/edit#gid=0

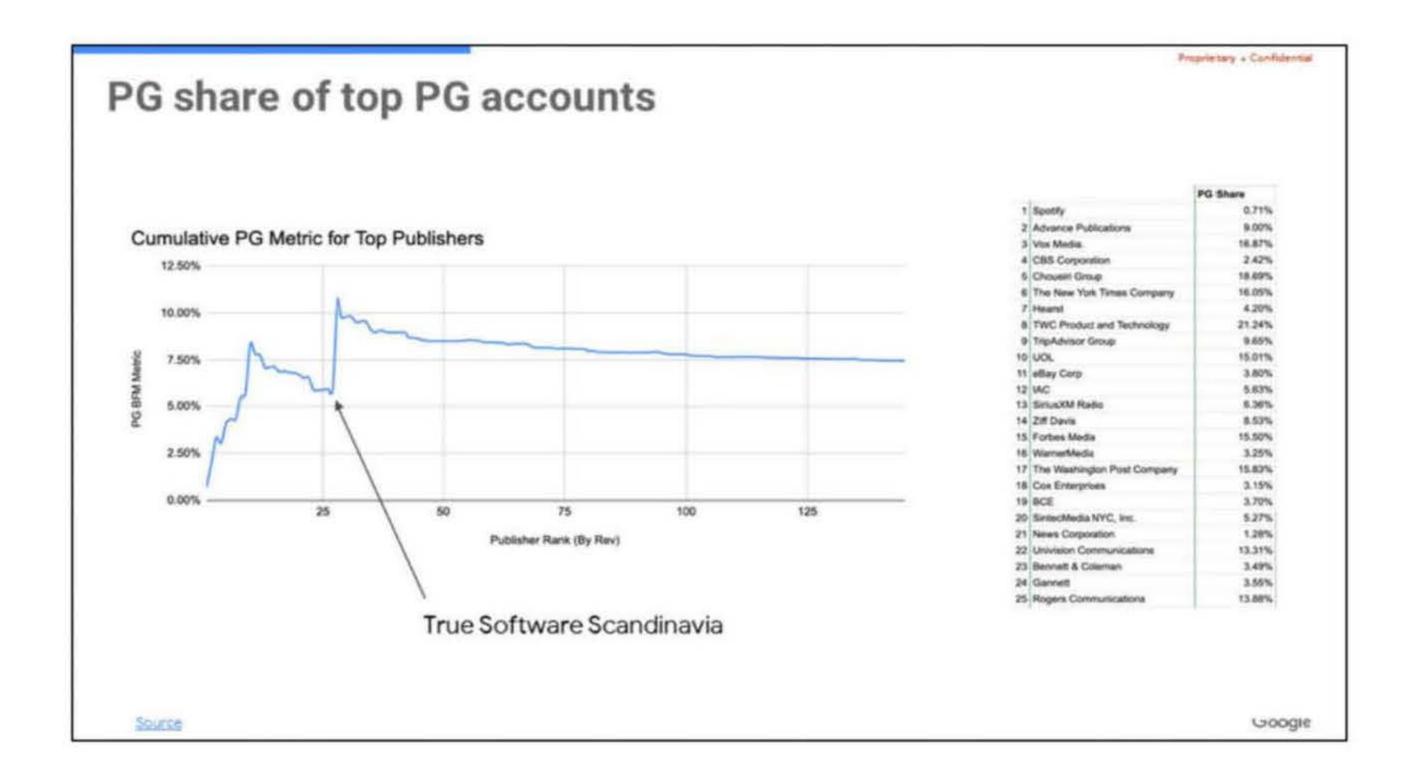
APAC pipeline source:

https://docs.google.com/spreadsheets/d/135r7uzEDinbK8HHZFUrg5l5_yE8Oml499V wjWvNAStw/edit?ts=5ceba497#gid=639338210

NA pipeline source: https://docs.google.com/spreadsheets/d/1YEiGDB Ld Ui54T-5elqsQ7H1Sm7sUoyh9l4iRjBCcY/edit#gid=0

Proprietary + Confidential PG share by inventory type PG Share App 90 Day App Dalta PG Share Dopley 10 Displey Day Delta PG mg 50 Day Drowth (%) Direct my 90 Day Browth (%) In Pod PS Shark 95 Day Dalta PD mg (in B) Direct mg PS Share Video No (in It) Video Day Delta 8.56% Y 2 12.23% A.S 1.93% -928.32 3.89% 4.00% -38.67 8.01% - All Z.44% --10.27% 4.3 4.49% --28.72 0.72% 610.54 -3.29% - LPS -6.85% 21,89% 374.70 6.28% ¥ 4 3.28% # 1 2.51% --3.32% W 1 12.67 + Americas 21.90% A.4 26.51% 4.2 2.89% ... 98.85 20.89% 11.96% A 2 13.43 46.23% + APAC 1.40% --0.94% ... -6.97% 10.26% ¥ 1 * EMEA 1.73% -2.42 -15.17% 137.00 2.02% 4.1 8.03% 4.2 1.11% -18.81% A.W. 9.94 36.57% 317.78 -5.04% - OPG 120.37 2.213 0.72% *** 1.29% >0 -13.94% 6.63% 1.31% -1.59 + Americas 2.26% ¥2 1.58% W 1 1.66% --1.715 ---1.06 20.90% 61.90 -5.04% + APAC 7.28 27.36% 4 12 0.70% .--60.23% 135.51 -3.59% 29.625 4.15 * EMEA 5.10% A 2 Google







Advertiser Breadth

1,794 total PG advertisers on DV360

(Display) 1,325 PG advertisers (Video) 927 PG advertisers

Below are revenue weighted breadth metrics, the EXACT calculation is DV360 revenue for pubs with PG / Total DV360 revenue

PG Breadth - 63%

Video - 54%

Display - 55%

Notes:

- This is NOT an apples to apples comparison to the Sell-Side Breadth metric because it is looking at Dv360 revenue, not direct reservation stats from DCM
- Video is video ads NOT instream video inventory, and Display is just display ads on any environment

Proprietary - Confidential Legend Status of Additional Product Asks on PG from Sales Committed Not yet committed Feature Parity with Reservations Feature creating exclusive PG value Committed Buy/Sell/Both Timing Committed Feature Buy/Sell/Both Timing. Feature Creative-level targeting Sell Launched HT Expose value-added metrics in reporting: sparn, viewability, 2-way fcap Both HI Yes Post-bid brand safety blocks Buy. H2 YYes Brand Lift for PG Both HI Yes: Ves Makegoods Both H2 PG with Freq. Management. Buy H1 Yes CPM Sponsorships Both H2 No Buy PG with 3rd party lists HI Launched Rich media + RM reporting H2 No Buy PGX-Launch 2 SSPa H1 Launched Buy H2 User rolles Buy No PG with Google Affinity and Demo data Sell Yes H1 Master/companion setup H2 Both No Expose value-added metrics in Reporting: CCO Foap Buy H2 Ves Upfronts support Both H2 No Expose value-added metrics in UI: spam, viewability, 2-Both Makegoods with bonus impressions H2 No Buy HZ. Yes way fcap Non DFP Video inventory access Both H2 No PGX - Launch 2 more SSPs Buy H2 No Workflow to prevent improper pausing of deal H2 No Both Recommending PG inventory? H2 No CPD Spansorship for Authorized Buyers Sell H2 No vCPM counting / billing Sell H2 Custom Creatives (post-GA requests) H2 Both No Customer match Sell H2 No Features Improve Usability and Serviceability Publisher Profile Improvements Sell H2 No Buy/Sell/Both Timing Committed Feature Features Building for Video Publishers and Broadcasters Creative Configuration transparency HI BUY Yes Deal sync/seller API PGX Yes Buy HT Buy/Sell/Both Feature Timing Committed Troubleshooter improvements, Buy H2. Yes Preview / test creatives before go-live Sell Yes HIL Pre-flight testing Sell HI Yes Sell TV content bundles in marketplace H1 Yes ATP's blocking deals in LI troubleshooter Sell HT Yes Improve quality of metadata in Ad Creative Review Sell No H2 Prevent bad inventory targeting Buy HI Yes

Prevent bad inventory targeting

Buy

H2

No

Google

